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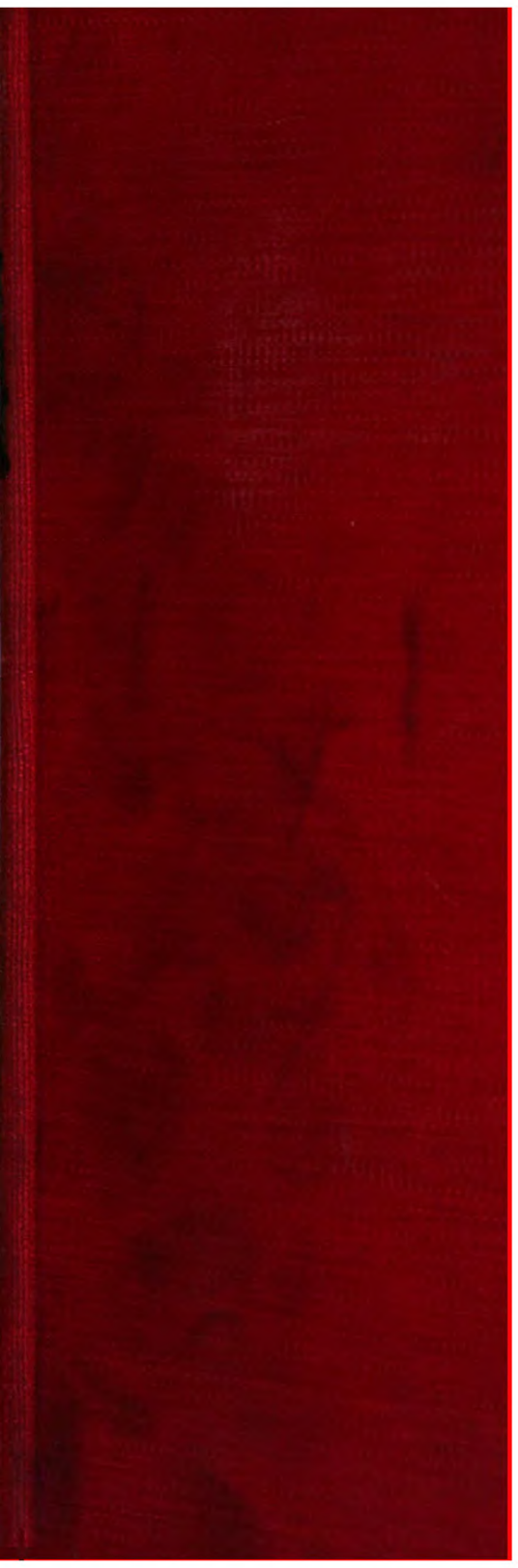
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Volume XVIII New York, N. Y., U. S. A., April 2, 1908 Number 1

N.Y. Transportation Co

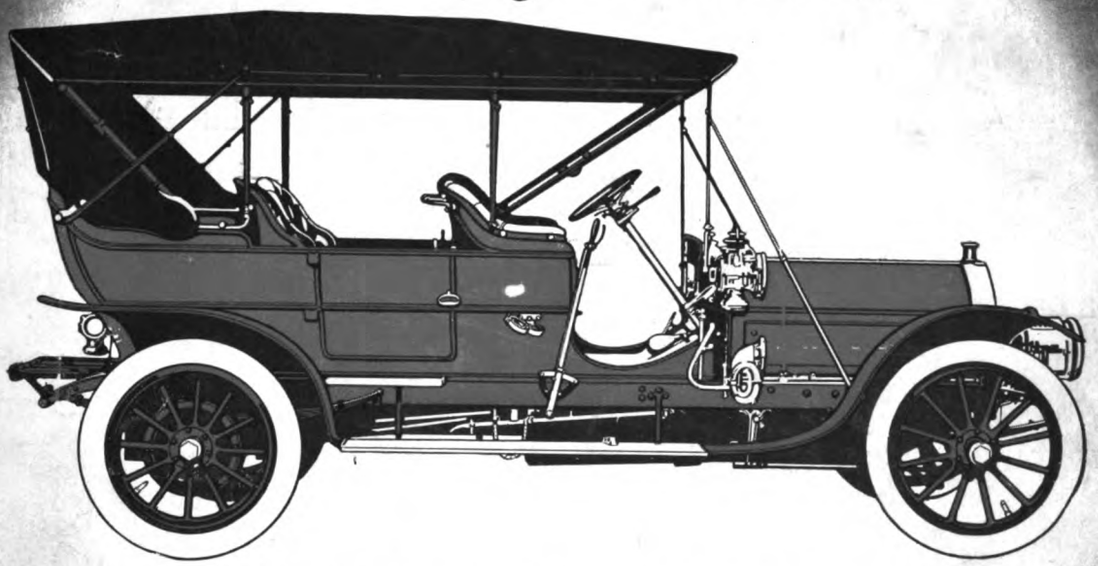
THE MOTOR WORLD

A trade paper giving the World's Motor News

Ten cents a copy—
Two dollars a year



The Great Arrow SIX-Cylinder



If you are an engineer, you will understand a statement of just why six cylinders add to the comfort and luxury of the Pierce GREAT ARROW as well as to ease in manipulation. But even the non-technical motorist, who understands nothing of the working of a gas engine, can appreciate the difference between four-cylinder and six-cylinder cars by riding in them.

THE TWO MOST NOTICEABLE EVIDENCES OF THE NEW TYPE ENGINE ARE THE ABSENCE OF VIBRATION AND THE EASE OF OPERATING

HERE ARE THE 1908 TOURING CARS

- 4-cylinder Great Arrow, 30 H. P., Price, $4,000
- 4-cylinder Great Arrow, 40 H. P., Price, $5,000
- 6-cylinder Great Arrow, 40 H. P., Price, $5,500
- 6-cylinder Great Arrow, 60 H. P., Price, $6,500

THE GEORGE N. PIERCE COMPANY,
Members A. L. A. M.
BUFFALO, N. Y.

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Why Not Minimize Your Tire Troubles?

There's only one way
to do this, and that is to equip your
car now with tires that are absolutely right in
design, workmanship and material.

HARTFORD TIRES

on your car will insure a season of pleasure and tire satisfaction
you've never experienced with any other make—because
Hartford Tires are right. They mark the standard
by which tire quality is measured.

¶If your car is a new one, insist on Hartford Tires. If it is an old one, make it new by equipping it now with Hartford Tires, and eliminate for this season your old friend "The Tire Bugaboo." ¶The Hartford Midgley Tread Tire is the most successful, "legal" non-skid device.

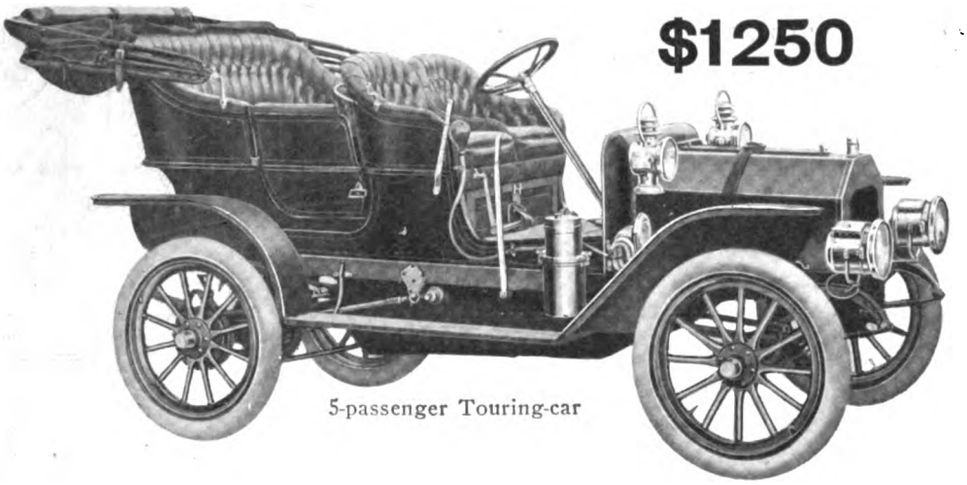
MILLIMETRE SIZES FOR FOREIGN CARS

The Hartford Rubber Work Co., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michagan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 55 Auburn Ave.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Gugler Electric Mfg. Co., Minneapolis; Mercantile Lumber & Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 903 S. Main St.; Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Salt Lake Hardware Co., Salt Lake City; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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5-passenger Touring-car

REO

Big return on small investment

EARNS MONEY

I purchased my folding-seat REO for my own family but it has earned $300 for me after hours, at livery work. It makes about 23 miles on a gallon of gasoline, with four passengers. It is as good as new. I have yet to find a hill too steep for it to climb.—*D. F. Hyman, Shelton, Neb.*

HELPS BUSINESS

Since 1905 I have run my REO Touring-car 20,000 miles. It is most economical in tire-wear. Oftentimes six months have elapsed without its being in the shop. It is continuously out of doors from 8.30 A. M. to 7 P. M. in summer's heat and winter's cold.—*Charles Aldrich, M.D., Cleveland, Ohio.*

Can you afford to overlook it?

REO 4-passenger Runabout $ 650
REO Roadster - - - $1,000

REO 5-passenger Touring-car $1,250
Prices f. o. b. Lansing

Write for the new REO catalogue. Ask any REO dealer to demonstrate what the REO will do for you.

R. M. OWEN & CO., Lansing, Mich.

General Sales Agents for REO Motor Car Company

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$2500 $3000 $3750

HAYNES

Kokomo, Ind.

National

Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K—4-cyl., 4⅞x5 $3500

Model R—6 cyl., 4½x4¾ $4200

Model N—4 cyl., 5x5 $3700

Model T—6 cyl., 5x5 $5000



Write for Particulars

National Motor Vehicle Company

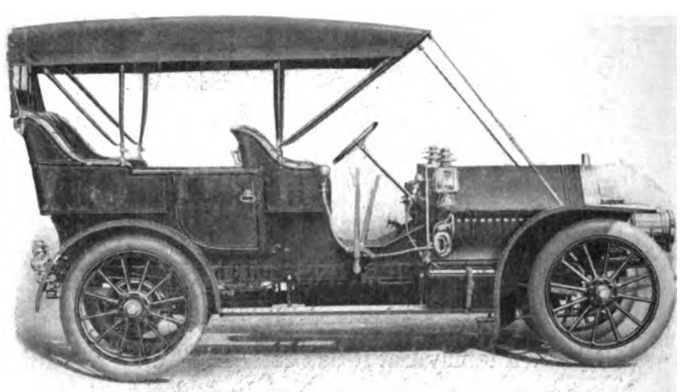
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THE "JEWEL 40"

THE "NON-SKIDDING" CAR



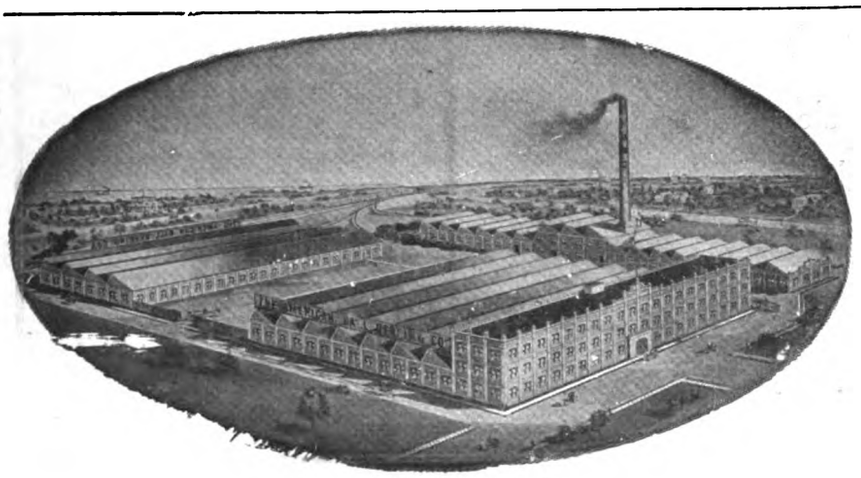
Compare following specifications with other cars at $3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY

234 Walnut Street, - Massillon, Ohio, U. S. A.



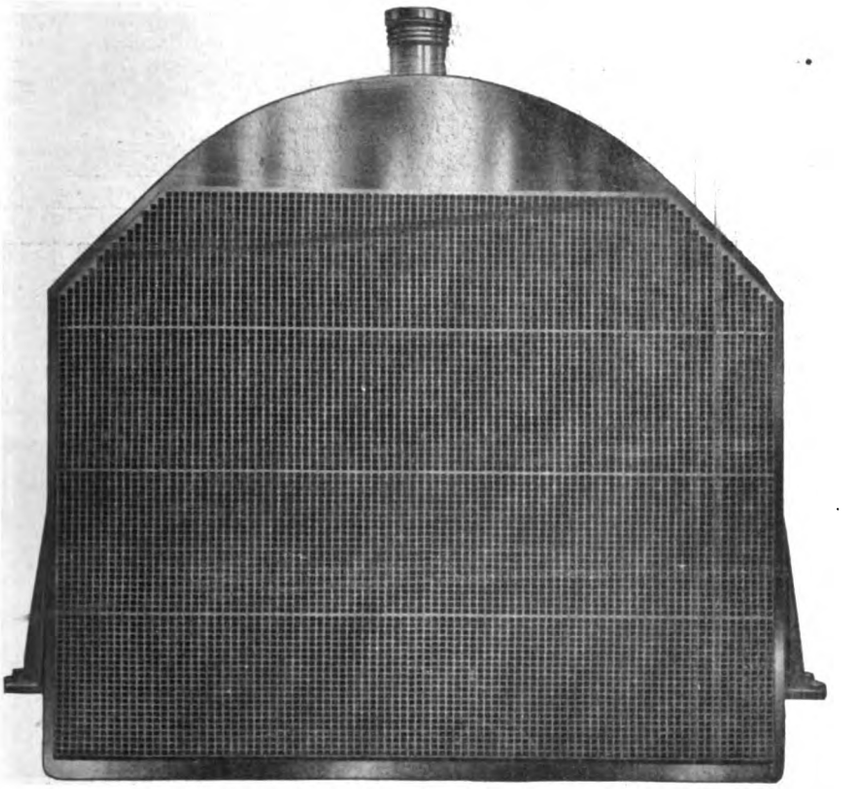
The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park

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¶ It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

¶ "What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

¶ Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

¶ **The Mayo Radiator** is **The Quality Radiator.**

¶ If you are a **Quality Maker** better write us at once.

HONEYCOMB, CELLULAR OR FLAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.

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The Garford automobile is designed to be the type of the day.

In every element that enters into the final product, the Garford undertakes to conform to the most approved engineering and constructive practice in the art of automobile building.

Expressed differently, the consensus of opinion of those best qualified to judge is in favor of certain types and standards proved good by general experience, and the Garford strives to conform absolutely to these accepted standards.

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Eastern Inquiries
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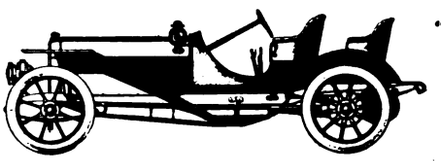
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All cars are Licensed and Guaranteed

Sold by us under Selden Patent for One Year

Palmer-Singer Six-Fifty Racing Car, 6 Cylinder 60 H. P., $2,450.

Palmer-Singer Four-Forty, Seven Passenger Touring Car, 40 H. P., $4,000.



Palmer-Singer Six-Sixty, $2,850.

Palmer-Singer Four-Thirty "Skimabout" 4-Cyls. 28-30 H. P. $1,950

Palmer-Singer Town and Country Car, 28-30 H. P. $3,000

We built the Palmer-Singer Six-Sixty to fill our ideal of what a high-speed touring runabout should be. It is the Sportsman's car De Luxe, and neither in this country nor abroad is there anything of its class and type to compare with it, irrespective of price.

Metropolitan Distributors the Selden

Palmer & Singer Mfg. Co.

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Sole Distributors the Simplex

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Matheson

ONE YEAR GUARANTY

Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



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Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

Studebaker

Electric Cars

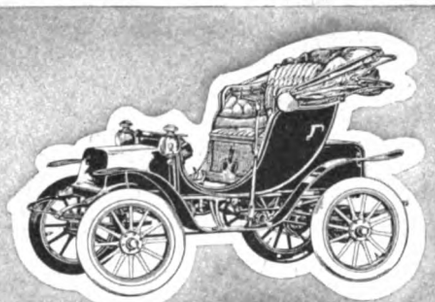
The popularity of this splendid line of electric cars is constantly growing.

Dealers in high class gasoline cars will find it to their interest to write for detailed information regarding our extensive electric selling campaign

Studebaker Automobile Co.

SOUTH BEND, INDIANA

General Office: CLEVELAND, OHIO



Studebaker Electric Victoria-Phaeton

One Price for Warner Auto-Meters

NEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us — it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out — that hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

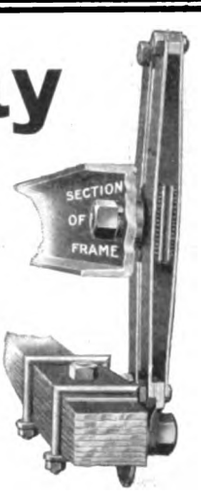
THIS STAND IS POSITIVE.



Warner Instrument Co.

146 Wheeler Ave., Beloit, Wis.

Free Play



of the springs over slight inequalities with a retarding friction gradually applied in proportion as the shock becomes greater makes the riding easy and smooth over every kind of road, saves the tires, prevents broken springs and protects the engine.

Gabriel Shock Absorbers are the only ones that permit the full benefit of the springs up to their elastic limit, restrain gradually beyond that point and double the efficiency of every spring.

Can be attached to any car or any spring. Write for full description.

THE GABRIEL HORN MFG. CO.

1417 East 40th Street, CLEVELAND, OHIO

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DOCTOR—

VISIT MORE PATIENTS OR HAVE MORE TIME TO YOURSELF

Your time saved pays for a Mitchell in one year

Ask one of the list below. Very likely you know some of them. A Mitchell runabout makes five calls to a horse's one.

We will refer you to hundreds of doctors. Any one of them will tell you that they wouldn't be without a Mitchell car because the Mitchell Runabout simplifies their work. You make your calls and are through when the "doctor and the horse" are but half way if you go in a Mitchell.

Then you can increase your practice without neglecting anybody or enjoy some needed recreation.

You doctors who are very busy cannot know what the Mitchell really means to you until you have our agent take you over your route some day and "show you."

The Mitchell is the handiest, most reliable and economical runabout obtainable.

Make your calls just one day in a Mitchell Runabout. It will open your eyes to the time you can save. Any agent will be glad to take you any time. Just call him up.

The Mitchell Runabout at $1,000 is the proven doctor's car.

The proof is in the fact that Mitchell Runabouts to the value of $1,000,000 have been bought by doctors in the last two years—1,000 of these handy cars being in use today by doctors of prominence.

I have used your 1907 Model Runabout for nearly a year and find it highly satisfactory for professional work in this city. It is easily cared for, ready for service in all kinds of weather, and I can unhesitatingly recommend it to anyone wishing a reliable machine.

J. E. Hequenbourg, M. D.

My 1907 Mitchell Runabout has taken me where I want to go and has brought me back without any trouble. It has climbed all hills on high gear. It has several times attained the speed of 43 miles per hour. It has averaged 20¼ miles per gallon of gasoline. It has no cost me one cent for repairs. This ought to satisfy anybody.

Gregory H. Hovnanian, M.D.

I take pleasure in writing you that I have been using your four-cylinder runabout for the past two years, with perfect satisfaction. It has never failed me and has proved to be a great saver of time and energy.

R. B. Preble, M. D.

Here are a few of the Chicago Doctors who use the Mitchell—every day—rain—sleet—snow—or sunshine. An investment of $40,000 is represented in this partial list.

Dr. Hugh Patrick	Dr. F. J. Buss
Dr. W. H. Allport	Dr. H. J. Dorn
Dr. E. B. Tuteur	Dr. G. A. Hopf
Dr. R. W. Holmes	Dr. A. T. Horn
Dr. Wm. L. Noble	Dr. R. J. Gay
Dr. F. R. Sherwood	Dr. J. B. DeLee
Dr. J. R. Ballenger	Dr. N. Seibert
Dr. G. S. Dobbins	Dr. R. B. Preble
Dr. J. B. Honch	Dr. J. E. Hequenbourg
Dr. A. J. Behrendt	Dr. Paul Hulhorst
Dr. R. O. Knapp	Dr. C. B. King
Dr. J. C. Hollister	Dr. L. Ryan
Dr. O. B. Smith	Dr. C. F. Stewart
Dr. A. Paulson	Dr. P. S. Chancellor
Dr. F. Monge	Dr. Fred W. Gethro
Dr. C. E. Paddock	Dr. G. H. Hovnanian
Dr. L. S. Simons	Dr. Geo. F. Pierce
Dr. W. D. Hawley	Dr. W. H. Reid
Dr. B. B. Eads	Dr. M. P. Hatfield
Dr. Henry Schmidt	Dr. J. H. F. O'Neil

Ask these men what they think and ask the Mitchell agent to take you out for a day's visits. No obligation on your part.

Catalog No. 18 describes the new models. Get it of the agent or write us.

MITCHELL MOTOR CAR CO.

Let us send you Catalog No. 18 and book containing 150 Chicago endorsements similar to those above.

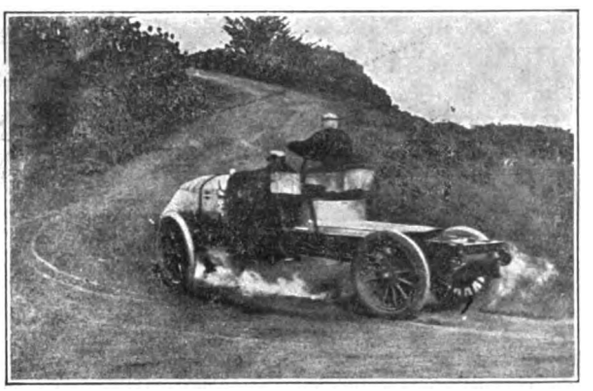
281 Mitchell St., RACINE, WIS.

Member A. M. C. M. A.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



CLEAN SWEEP FOR THE WHITE IN CALIFORNIA HILL CLIMB

The White Steamer won all three events in which it was entered in the hill-climbing carnival held at San Francisco in connection with the recent automobile show. A 30 H. P. White touring car won the class for cars costing up to $3500, and a 20 H. P. White touring car won in the $2500 class. In the free-for-all, the same 30 H. P. car, with body removed, again triumphed. It made the climb in 1:38⅘, which is 10 seconds faster than that made by its nearest competitor.

The superiority of the White in hill-climbing has been demonstrated in every public contest in which it has competed or, more properly speaking, been allowed to compete. Hill-climbing ability is the true test of real power, of available power, of power at the rear wheels, and it is evident that hill-climbing contests furnish the real demonstration of what the various systems of motive power can do, and that the tables of "rated horse-power" are of purely theoretical interest.

Write for Literature

THE WHITE COMPANY

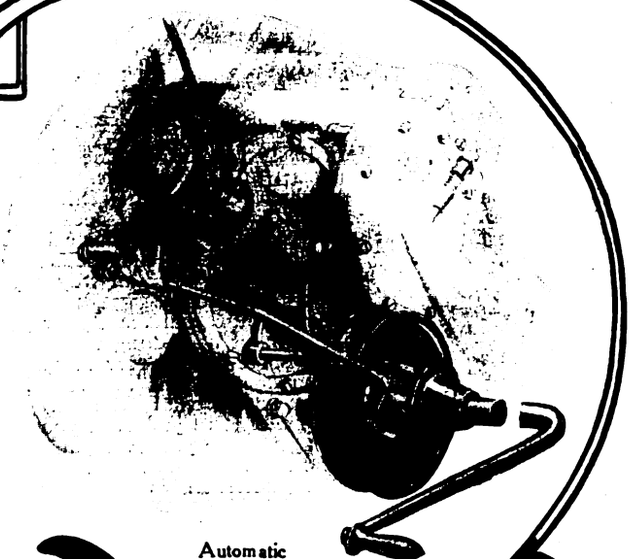
CLEVELAND, OHIO

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Philadelphia, 629-33 N. Broad St.
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Cleveland, 407 Rockwell Ave.
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The Matter of Safety

is often overlooked by automobile designers and results are often serious, sometimes disastrous. In the



Automatic Sprak Retarder

Rambler

this is considered an important detail and safety of operator and car is given equal consideration.

A leading feature is the automatic spark retarder, by means of which engaging the starting crank positively retards the spark, thus removing all danger from premature ignition.

As to safety of the car, there is no greater source of trouble than loosened bolts or nuts.

In the Rambler this is prevented by the use of Rambler lock nuts that positively cannot come loose, or by castellated nuts locked in place by cotter pins.

These are in themselves but small things, but it is such attention to little things that makes the Rambler

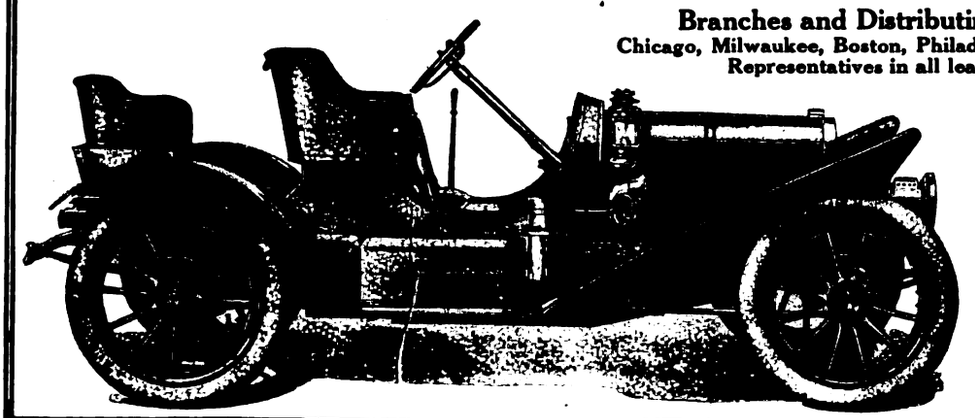
The Car of Steady Service

Our catalog tells the story. Write for it today or see our nearest representative.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.

Branches and Distributing Agencies:
Chicago, Milwaukee, Boston, Philadelphia, San Francisco.
Representatives in all leading cities.



Model 34A,

32 H-P,
Selective
Transmission
Shaft Drive

$2,250.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, April 2, 1908. No. 1

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CHALFANT TO SUCCEED BUDLONG

Appointed Assistant General Manager of A. L. A. M., with Full Control—His Career in the Trade.

E. P. Chalfant has been appointed assistant general manager of the Association of Licensed Automobile Manufacturers and will assume the duties of the office on April 15th.

Chalfant's appointment was announced immediately after a meeting of the executive committee of the association on Tuesday last and caused considerable surprise as his name was not among the many which had been mentioned in connection with the vacancy caused by the resignation of General Manager Budlong. In fact, owing to Chalfant's designation as assistant general manager, some doubt existed as to whether he was fully succeeding to Budlong's office. When a question to this effect was put to those in authority it brought this reply:

"Mr. Chalfant will have full control."

Like so many of those identified with the automobile industry, Chalfant graduated from the bicycle business. During later years he was head of the International Tire Co.'s sales department and for several years past and at the present time, he is sales manager of the Waltham Mfg. Co., whom he represented on the A. L. A. M. board. He is a large, serious man and has the reputation of being an earnest, painstaking worker.

Waterloo Cars Cooled on New Plan.

The Waterloo Car and Engine Co. has been formed in the Iowa city of that name with these officers: W. M. Law, president; E. P. Caldwell, secretary; H. B. White, treasurer. The company purposes building both automobiles and street cars which will be driven by gasolene engines the feature of which is "a new and improved means for cooling the cylinders." It is explained that the new method is "simply a combination of air and water"—very much less of water than now is usually used.

John Kane Mills Admits Bankruptcy.

John Kane Mills, president of the Dragon Motor Car Co., which recently went into the hands of receivers, last week filed a voluntary petition in bankruptcy in New Jersey, Mills being a resident of Morristown in that State. The difficulties of the company are said to be partly responsible for his failure. His liabilities are placed at $292,851.08 and the assets at $121,576. Of the liabilities $141,701.35 are in secured claims and $49,399.73 unsecured.

Three Companies Increase Their Capital.

Three concerns identified with the automobile industry have certified to increases of capital stock, as follows: Corbin Motor Vehicle Corporation, New Britain, Conn., from $200,000 to $500,000; Mason Motor Car Co., Des Moines, Iowa, from $50,000 to $100,000 and the Pennsylvania Rubber Co., Jeanette, Pa., from $750,000 to $1,500,000.

Trustee Sells Kansas City Plant.

The trustee in bankruptcy of the Kansas City (Mo.) Motor Car Co. last week sold the plant to F. E. Wear, who originally had sold to the company the twenty-seven-acre site on which the the plant stands. The price paid was $47,000, enough to pay about 15 cents on the dollar to the creditors. A lot of machinery in the plant went for $4,200.

Lightning Fires an Automobile Factory.

Lightning which struck the Port Huron (Mich.) plant of the Northern Motor Car Co. on Friday evening last, 27th inst., caused a fire which entailed damage to the extent of about $10,000. The loss is fully covered by insurance.

Shoemaker Assets to be Sold.

The court has authorized the receiver of the Shoemaker Automobile Co., Elkhart, Ind., to sell the property at its assessed value, $17,965.57.

MAY ORGANIZE TRAVELING SHOW

"Independents" Appoint Committee to Consider Gigantic Scheme—Outline Plan of a Three Months Tour.

Although it is stated that it does not necessarily imply that the association will not again join with the Automobile Club of America in promoting a show in New York City, "independent" show affairs took a rather unexpected and sensational turn at a meeting of the Committee of Management of the American Motor Car Manufacturers' Association, held in New York on Monday last, and while not officially adopted, a special committee was appointed to make a report at the next meeting. Briefly, the idea is that of a gigantic traveling show which will be carried half-way across the continent. Instead of asking people to visit other cities to see an automobile show, it is planned to carry the show to their towns during the selling season when people are ready to buy cars. Something of the same sort was undertaken a few years ago by an individual manufacturer, but the present plans call for participation by all the 52 members of the A. M. C. M. A.

The idea as outlined at yesterday's meeting, and which originated with Charles E. Lewis, of the Jackson Automobile Co., calls for a special train of thirty freight cars to carry the machines, and a train of Pullmans for the salesmen and demonstrators. The trip would last at least three months, a day or two being spent in each city having a population of more than 100,000.

If the plan is adopted, the start will be made from Detroit, thence going to Cleveland, Rochester, Syracuse, Utica and Albany. Following this route, the cities visited will include Springfield, Worcester, Boston, Providence, Hartford, New Haven, Bridgeport, New York, Newark, N. J., Atlantic City, Trenton, Philadelphia, Baltimore, Washington, Richmond, Charleston, W. Va., Pittsburg, Columbus, Cincinnati,

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Indianapolis, St. Louis, Kansas City, Omaha, Des Moines, Minneapolis, St. Paul, Milwaukee, Chicago and Detroit.

With the participation of say fifty automobile manufacturers, with cars listing from $500 to $9,000. the pro rata cost would be very materially reduced, although the estimates furnished by the contracting agents of the railroads, indicate a total expenditure of about $100,000.

Besides showing the cars, the scheme includes hill climbing and other contests to indicate the worth of the various cars.

At Monday's meeting of the Committee of Management there was a general discussion regarding trade conditions, while reports of a routine nature were heard. The proposed carnival in New York City was heartily endorsed. Those present at the meeting were: H. O. Smith, Premier Motor Mfg. Co.; G. V. Rogers, Mitchell Motor Car Co.; R. M. Owen, Reo Motor Car Co; C. C. Hance, Nordyke & Marmon Co.; W. H. VanDervoort, Moline Automobile Co.; S. H. Mora, Mora Motor Car Co., and Alfred Reeves, General Manager. In the absence of Benjamin Briscoe, chairman of the committee, H. O. Smith occupied the chair.

Jury Gives Dickinson $19,000 Verdict.

After a trial lasting ten days, a jury in the United States court at Scranton, Pa., awarded Fred S. Dickinson a verdict of $19,000 against the Matheson Motor Car Co. of Wilkes Barre. Dickinson claimed that he acted as agent for Charles R. Greuter in the sale of certain patents to the defendants, and that he was promised 40 per cent. of any sum that the sale realized. The defendants claimed that while Dickinson acted as agent for Greuter, in purchasing the patents, they eliminated the plaintiff in their calculations altogether.

Three Dixons Form Two Companies.

H. S., W. F. and E. M. Dixon, who have incorporated two separate International Motor Car Companies, one in Illinois, the other in New York, each capitalized at $250,000, are said to be merely acting for other men. It is understood that the companies were formed to take over and operate the W. O. Worth patents which have been bobbing up periodically for several years and under which a number of friction driven trucks and busses have been built at Evansville, Ind., by the Worth Motor Car Mfg. Co.

Lausier Joins the Timken Staff.

Edwin B. Lausier has resigned as sales manager of the motor department, American and British Mfg. Co., of Bridgeport, Conn. He has accepted an important position with the Timken Roller Bearing Axle Co., Canton, Ohio.

Moon May Shine in New Place.

The Moon Motor Car Co. may remove from St. Louis to Detroit. Officers of the company say that they are considering a "flattering offer" but have not reached a decision.

In the Retail World.

The Hygrade Motor Car Co., Newark, N. J., has given up its garage at 11 and 13 Hill street.

C. A. Dundas has opened a new garage at 757 West Seventh street, Riverside, Cal. He will handle a California made car.

The garage of the Canada Cycle and Motor Co., 20-22 West Adelaide street, Toronto, suffered a fire on March 21st. The loss is placed at $1,000.

D. M. Jackson is now the sole owner of the Warren Automobile Garage, Warren, Pa. Previously that garage was conducted by the firm of Jackson & Cross, but Cross has withdrawn.

Paul Melchart, of Pittsburg, has been in Wheeling, W. Va., for several days demonstrating the White car. The reason: The White Company will shortly open a branch there and Melchart will be in charge.

The Corn Belt Auto Co., of Waterloo, Ia., is expanding. A branch house will be opened at 324 South Main street, Mason City, under the name Mason City Auto and Supply Co. Frank W. Bryant will be in charge.

The Fred A. Mabbett Co., Rochester, N. Y., has consolidated with the United States Automobile Co., which latter title will be continued. The concern will handle the Pierce, Locomobile, Franklin, Selden, Stevens-Duryea, Cadillac and Oldsmobile.

F. J. Jastrin's automobile shop, on Exchange street, Freeport, Ill., is to be enlarged. The addition will be a two-story, 40 by 60, structure of brick, with concrete floor and unobstructed by posts or partition walls. It will be used as a garage. The contract price is $3,000.

Webb Jay, the former well known race driver of the White, now in business in Chicago for himself, has added another car to his list. He will be agent for the Acme, in addition to the Kisselkar, and the Webb Jay steamer. It is stated that his company has been reorganized and capitalized at $500,000.

The Hayes Rubber Co., which recently set up a tire and supply store on Warren street, New York, has for its treasurer and backer none other than David Grinberg, who is one-half of that peculiarly interesting firm, Grinberg & Morris, who prefer to trade under the title Manhattan Storage Co. and other names. Many things in the Warren street establishment indicate that Grinberg influence is both active and strong.

The Week's Incorporations.

Milwaukee, Wis.—Haines Motor Co., The, under Wisconsin laws, with $10,000 capital. Corporators—Samuel J. Haines, William E. Brown.

Kankakee, Ill.—International Motor Car Mfg. Co., under Illinois laws, with $250,000 capital. Corporators—W. F. Dixon, H. S. Dixon, E. M. Dixon.

New York City, N. Y.—International Motor Co., under New York laws, with $250,000 capital. Corporators—W. F. Dixon, H. S. Dixon, E. M. Dixon.

Stamford, Conn.—United Motor Car Sales Co., The, under Connecticut laws, with $5,000 capital. Corporators—W. H. Taylor, W. E. Scofield, John L. Judd.

Robinson, Ill.—Bessemer Gas Engine Co., under Illinois laws, with $200,000 capital; to deal in engines and machinery. Corporator—H. B. Willower, Robinson, Ill.

Tenafly, N. J.—Tenafly Auto and Supply Co., The, under New Jersey laws, with $3,000 capital. Corporators—H. LeRoy Demarest, Clifford Demarest, J. E. Tuttle.

St. Louis, Mo.—Gardner Motor Vehicle Co., under Missouri laws, with $75,000 capital; to manufacture and deal in automobiles and supplies. Corporators—John W. Gardner, E. T. Jones.

Brooklyn, N. Y.—Modern Automobile Co., under New York laws, with $3,000 capital. Corporators—Leonard Vielbig, 238 Grove street; Charles C. Limbarth, 529 Monroe street; Henry Delle, 84 Bleecker street, Brooklyn, N. Y.

New York City, N. Y.—Securo Mfg. Co., under New York laws, with $25,000 capital, to manufacture automobile parts. Corporators—Raymond Magee, Charles B. Young, and Henry S. Reynolds, 111 Broadway, New York City, N. Y.

Somerville, N. J.—E. W. Stevens Co., The, under New Jersey laws, with $200,000 capital; to manufacture vehicles, engines, etc. Corporators—E. D. Cronin, Brooklyn, N. Y.; F. Knowlton, New York City, N. Y.; R. H. Osgoodby, Somerville, N. J.

Wilmington, Del.—Auburn Motor Car Co., under Delaware laws, with $10,000 capital. Corporators—Frederick Liebfried, Jr., 503 Chestnut street, Philadelphia, Pa., Howard W. Trump, Jenkintown, Pa.; M. G. Ryan, 910 Spruce street, Philadelphia, Pa.

New York City, N. Y.—Senate Motor Car Co., under New York laws, with $100,000 capital. Corporators—Albert W. Meisel, 5 Beekman street; Frank O. Fuller, 522 West 147th street; Christopher B. Craske, 106 West 78th street, New York City, N. Y.

Motor Buggy Makers Go Under.

On the application of the F. A. Austin Pattern Co., whose claim for drawings and patterns amounts to $550, W. R. Craven has been appointed receiver for the Hatfield Motor Vehicle Co., Miamisburg, Ohio. The concern undertook to manufacture motor buggies but did not make any considerable progress.

Spier Quits Cars for Bearings.

John C. Spiers, manager of the Autocar factory, has resigned that position to become factory manager of the Standard Roller Bearing Co., Philadelphia. Spiers has full charge of the manufacturing department of the latter concern.

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SHRINKAGE IN FEBRUARY EXPORTS

Lessened by Notable Gains in Six Geographical Divisions — Mexico Makes Biggest Cut in Figures.

During the month of February 151 complete automobiles, worth $301,240, and parts to the valuation of $47,124 were exported from the United States, the total representing a depreciation of $95,340, in round numbers, over the corresponding total of 1907. The loss is mainly in the value of complete cars, of which 213 were exported in February, 1907, the decrease in valuation of parts exported amounting to less than a third of the total depreciation.

The loss was made in the face of notable gains in the case of 6 of the territorial divisions of the export field, however. Italy, the United Kingdom and the group classed as Other Countries led in this counter movement with gains of $33,500, $27,300, and $11,900 approximately, in the order named. Of the countries displaying less interest than heretofore in the American product, Mexico took the lead with a falling off of no less than $82,507, West Indies and Bermuda, British North America and British Australia following with $44,200, $31,100, and $11,300 roughly speaking.

For the eight months ending February 29th, a gain of $188,577 over the corresponding returns for last year was developed. Only 1,518 cars were exported, as against 1,582 last year, their combined value, however, showing an increase of $220,841. The valuation of parts, however, revealed a decline amounting to $32,264. Of the eight countries showing improved markets for this period, the United Kingdom, with $363,582, France, with $100,990, and West Indies and Bermuda and South America, with $38,000 and $36,000 nearly, following. Losses were evidenced in the case of Mexico, which fell away to the extent of $273,674, British North America, and British Australasia, with losses in the two latter instances of $57,667 and $43,886, respectively. The report in detail follows:

	February		Eight Months Ending February		
	1907	1908	1906	1907	1908
Automobiles and parts of	.....	.....	$1,771,313	.....	.....
Automobiles*	$368,309	$301,240	.....	$2,471,859	$2,692,700
Parts of	75,394	47,124	.....	401,387	369,123
Exported to—					
United Kingdom	100,065	127,356	471,017	663,023	1,026,605
France	33,942	38,371	123,191	211,605	312,595
Germany	4,136	155	35,329	71,807	80,898
Italy	30,278	63,782	131,210	99,103	107,234
Other Europe	18,926	15,131	90,252	106,687	98,453
British North America	75,266	44,152	284,623	571,360	513,693
Mexico	96,262	13,755	166,510	561,335	287,661
West Indies and Bermuda	58,366	14,158	210,428	158,409	196,677
South America	6,260	4,251	48,041	137,641	173,599
British East Indies	183	1,241	28,364	21,325	20,598
British Australasia	15,101	3,774	118,846	184,678	140,792
Other Asia and Oceania	2,810	9,392	30,910	69,476	76,355
Africa	1,153	36	20,875	8,555	6,636
Other countries	955	12,810	11,717	8,242	20,027
Total automobiles and parts of	$443,703	$348,364	$1,771,313	$2,873,246	$3,061,823

*Number not stated prior to July 1, 1906.

Where Prosperity is at High Tide.

With orders on their books sufficient to keep their plant running for the next 18 months, the Continental Motor Mfg. Co., Muskegon, Mich., have let contracts for the erection of a new machine shop, 110 by 175 feet, which will be ready June 1st. The building will be of one story, absolutely fire proof and saw tooth roof construction. The Continental people intend to place their present machine shop equipment in the new building and are also making extensive additions and increases to their machine tool equipment comprising the latest and most modern machinery for accurate and precise work; most of these machines are automatic and are built specially for their use.

The Continental company have just completed a large motor testing house which is also fire proof and which they claim to be the largest and best equipped in the country for that purpose, there being capacity for testing 50 finished motors at one time. The proposed addition is the fourth enlargement of their plant, which has been made since they located in Muskegon less that two years ago, since which time the company had added motors for taxicabs and commercial vehicles and for a variety of uses foreign to automobiles.

Drops the Count and Takes up Plows.

Count Manuel de Caserta, who was seeking a site for a De Dion-Bouton factory in this country, and about whom some unpleasant stories cropped out, has dropped out of the enterprise, which it seems has not been abandoned. The count has been succeeded by W. J. Plows, Jr., of New York, and the industrial department of the Delaware & Hudson Railway still is making efforts to have the projected factory located on its route in New York State.

Big Business in Bosch Magnetos.

There is nothing the matter with the demand for Bosch magnetos. During the week ending March 14th, the Bosch Magneto Co. report the sale of exactly 4,970 of their instruments, and add that they are now over 1,000 behind orders.

RECEIVERS ARE NOT REMOVED

Toledo Effort to Oust Pope and Yule Fail of Their Purpose—But Third Receiver is Named.

As a result of the hearing on the two motions filed by Toledo interests which had for their object the removal of Albert L. Pope and George W. Yule as receivers of the Pope Motor Car Co., neither of them were removed. Instead, a third receiver, F. A. Scott, secretary of the Superior Trust Co., of Cleveland, was appointed, with special reference to the guarding of the Pope-Toledo interests.

The case was heard on Friday last, 27th ult., by Judge R. W. Taylor, sitting in the United States court at Toledo. It was notable for the great array of legal talent that was brought to bear, the petitioning creditors being represented by three attorneys and Receivers Pope and Yule by four.

The declaration was made by one of plaintiff's lawyers that at the time a receiver was asked for the Pope Mfg. Co. and the Pope Motor Car Co., the claims against the latter company did not aggregate more than $800, while the claims against the Pope Mfg. Co. amounted to more than one million dollars.

Other attorneys representing the creditors declared that the interests of Receivers Yule and Pope centered so strongly in the Pope Mfg. Co. that they would not be likely to give the creditors of the Motor Car Co. an impartial deal. It was also claimed that the parent corporation had drained the resources of the local plant without right.

After hearing the arguments, Judge Taylor said that while Receivers Yule and Pope might be valuable, it was plain they could not represent both sides and that he would appoint a third receiver.

The selection of Mr. Scott was announced later, and is said not to have been wholly agreeable to the Toledo people who had hoped for the appointment of a local man. It was indicated by the court that the duty of the third receiver would be to guard the interests of the creditors in the local plant and especially the claim of $800,000 which Albert L. Pope has against the Pope Motor Car Co.

Detroit Dealers Re-elect Old Officers.

At its annual meeting attended by every member, the Detroit Automobile Dealers' Association re-elected all the old officers, as follows: President, A. I. McLeod; vice-president, J. P. Schneider; treasurer, J. H. Brady; secretary, George E. Lane.

Hardy Locates on Forty-second Street.

The R. E. Hardy Co., the spark plug manufacturers, have removed from 86 Watts street to 25 West Forty-second street, New York.

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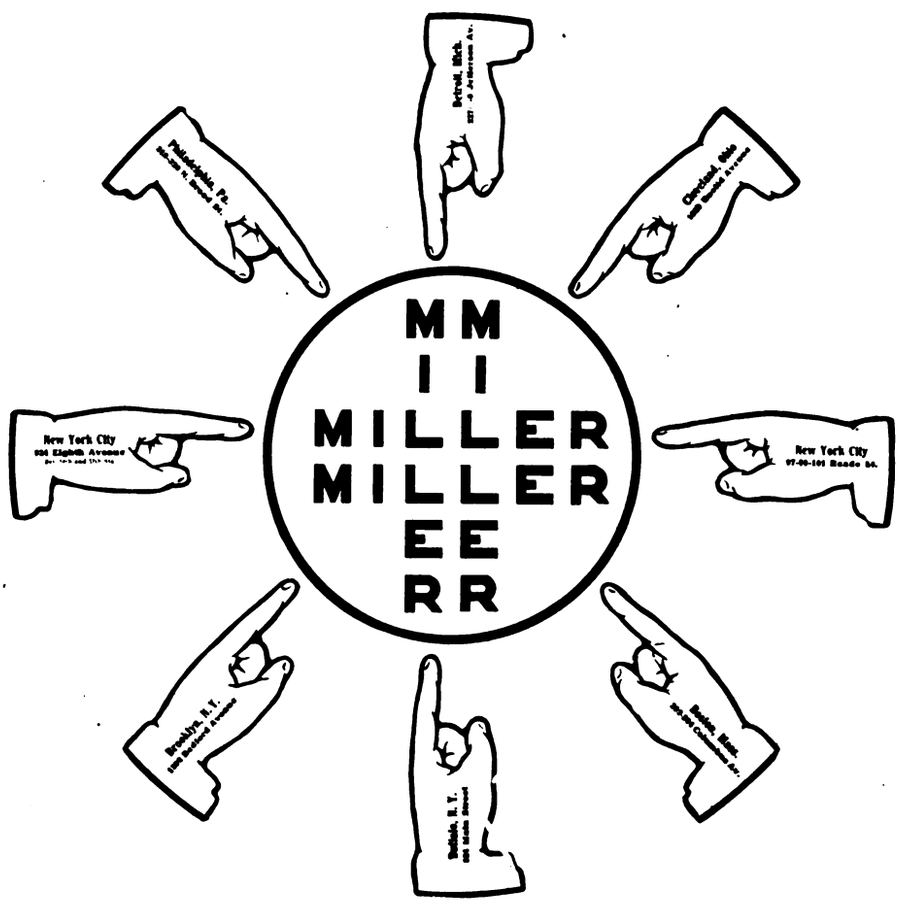
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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 2, 1908

About Fictitious List Prices.

It is becoming quite apparent that in the readjustment that is taking place in the automobile industry, there is crying need for readjustment of the prevailing prices of accessories. Those in position to know are well aware that in certain parts of the country conditions have arisen which have led to cut-throat competition on the part of the retail trade, while in many more places dealers simply cannot be induced to "stock up." They are "standing pat" or purchasing only to meet immediate requirements. As a result few of those who have to do with accessories are wholly happy.

It is a situation due largely to adherence to what may be termed "prosperity prices," which is but another term for "fancy figures" and fictitious lists. The time when possession of a motor car places a man in ures" and fictitious lists. The time when with the small car is cutting an increasingly larger figure in the industry and as small cars are not usually noted for a wealth of equipment, the size of his purse must be reckoned with for he is in many respects the most likely buyer of accessories, that is. when they are placed within his means.

The fictitious price never can endure and the manufacturer who forces himself to believe to the contrary rarely fails to encounter a day of reckoning which brings with it a rude awakening. Generally speaking, fictitious list prices prevail throughout the accessory trade. They were made to assure handsome profits to every person engaged in their sale. They were made to be handed down through a long line of middlemen. One of the purposes they have served has been to attract and enrich a not small number of nimble-witted merchants who consider that prices are made only to be cut, and so great is the tendency toward inflation that even these merchants do not scruple to add a dollar or two to prices in order to make their "discounts" appear the larger. The merchant whom we style legitimate has been the chief sufferer. Patronage simply has flown past his door. Such inflated prices have served their purpose and it were well that the fact be recognized before it is too late.

It requires no great perspicacity to discern that an article listed at say, $62, which is sold to an automobile manufacturer for say $22, and at the latter price nets a profit to the producer, is a "fancy price." The same is as true of the article which is catalogued at $1.50, and which can be sold by the jobber at a good profit for 60 cents. Inconsistencies of the sort are the rule rather than the exception and the time has come when they no longer promote sales, but retard them. The fact that even the Automobile Club of America has instituted a cut-price store is a straw which shows which way the wind is blowing. It indicates that even the men of means are rebelling against the enforcement of "prosperity prices." There are jobbers who freely admit that profits are mischievously disproportionate. There are dealers who not only admit it, but who have taken the bull by the horns and are measuring for themselves the size of the profit they consider fair. They are sharing with their customers when they are not refusing to "stock up."

Early in the season, one of the astutest men in the whole industry sized up the future as being one of unusual promise for the accessory people. He said in substance that however the year might pan out for the automobile manufacturer, the signs pointed to a volume of replacements which assured prosperity for the producers of accessories. It was the soundest of many forecasts that were presented. It is going awry not because of faulty sifting of evidence, but because the inevitable effect of the fictitious price is making itself felt. There are some things which automobilists must have, and must pay for; there are other things which they would have but can do without, and they are doing without them solely because the wisdom which comes with age and experience has taught them that there is "something wrong with the price." The indications that exist are plain even to those who are most affected and to close their eyes to the truth simply is inviting stagnation or commercial suicide.

The Motor World is well aware that prices and profits constitute a tender subject for discussion, but it is not its policy to blow colored bubbles that the trade shall be assisted in deceiving itself. The situation in the accessory market is one that calls for plain speech, openly expressed, before the mischief, already started, shall get beyond control. A readjustment of prices is necessary and without undue delay.

The Perfection of the Whole.

As a result of the intimate relationship between all the parts of the motor car, it happens that no effect can be produced except at the expense of all or nearly all of them, even though many of organs seem not to be in the least involved. Thus the very act of propulsion, though apparently confined solely to the power plant, is made possible only by the resistance of such other parts as frame, springs, axles, steering gear and even of the body as well. Nor are the resistances in question those to which the parts are nominally subjected in bearing the dead weight of the vehicle, but additional stresses due solely to the driving power of the motor. The average motorist, and, it is to be feared, the average designer also, has been slow in getting away from the idea that the only strains to which the machine is subjected are those due to the apparent purpose of every part, plus a substantial addition in the case of points supposed to be vulnerable to road shocks.

Before the bicycle could reach its present state of mechanical perfection, it was necessary to learn that no part was indis-

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pensable, that none could be superfluous, and that none could be skimped or slighted in the making, if a successful and substantial product was expected to result. Ultimately the motor car will have to be considered on this exacting basis and no part neglected in a close scrutiny the object of which shall be to determine the absolute suitability of every part for its place. A readjustment of values must take place before the entire vehicle may be expected to evidence a uniform degree of endurance in all its parts. It is not simply neglect that causes cars to fail in one particular respect during any given season, or for several seasons in succession. Rather it is apt to be ignorance on the part of the designer of the real causes of the difficulty.

Radius rod design and spring motion have not been commonly considered as factors in any way governing tire wear. Yet that such must be the case in certain instances, at least, has been demonstrated. The effect of spring motion on the steering gear, to take another example of apparent irrelevancy, or the effect of engine torque on spring wear, for still another, or again, the effect of spring motion in the wear of gear teeth in the transmission—these and a dozen other instances which readily come to mind are cases of direct relationship which, because of differences in nominal purpose, are lost to view in many cases, or guarded against almost blindly, with a convenient factor of safety.

Motor car design, in its best and most useful stage, must come to be admitted as one of the most successful exploits of engineering skill ever undertaken. It is not so recognized at present, nor will it be wholly successful until such recognition is afforded it. The man who has attempted to design a car comes to have a profound respect for it—not as the work of his hands, but as a problem. At present he is practically alone in holding that opinion. Later, the enormity of his task may be better and more generally understood.

Where Light is Wanted.

Unless he is more circumspect in his picturesque straddle of the issue, Prof. Schwarzkopf may not only sell Poobah Shattuck one of his ten dollar books but the poobah is as likely to propose him for membership in the Automobile Club of America as he unproposed him several sad years ago.

Despite the fact that the professor's foreign blood is the genuine article and the poobah's red circulating medium is merely imported and was injected by inspiration, it is not strange that their hearts occasionally should beat almost as one; for truly blood is thicker than gasolene.

But for the benefit of obtuse Americans, the professor should submit diagrams showing wherein a house divided against itself is stronger than the undivided house, and wherein an organization working for itself or for one community and which in doing so is pulling against all other organizations and all other communities, is serving the best interests of the cause for which it stands. Diagrams of the sort would quicken the sale of any book.

Prof. Schwarzkopf, whose say-so always is perfectly lovely, would further add to the blithesomeness of Spring, by pointing out not the unsnakeishness but the graciousness and other beauties of "good wishes" in which is artfully concealed a dose of poison bearing the plain but unwritten label, "We hope you choke."

In fact, nothing would serve so very many peculiar purposes as an essay from a Schwarzkopfian pen discussing thoroughly the advantages of co-operation which does not co-operate and of the admirable qualities of a large, domineering gentleman with a gorgeous beard that would make even Van Dyke envious, who, when he discovered several other large gentlemen, unhappily devoid of beards, who refused to be domineered, decided to shoot marbles all by himself in his own back yard. Who better could write such an essay than a professor of biography?

According to his press bureau, Chairman Hower of the A. A. A. Touring Board is little short of a god on pneumatic tired wheels. Although this opinion does not wholly agree with the sentiments of all who participated in the last Glidden touring contest, it may be true for all of that. Among other things, it is stated that in formulating the new rules, the doughty chairman has answered every criticism and corrected every fault, which is in the nature of cheering news. It will cause the rules to be awaited with keen interest. It will be interesting, for instance, to observe whether, with a fat surplus on hand, Mr. Tower and his committee still will require an entry fee of former proportions and whether there is to be repeated that silly procedure of permitting contestants to come within a few yards of controls and remain, watches in hand, until the proper moment for crossing the line arrives; also whether Mr. Tower will be again privileged to change a route if he sees fit and whether a schedule arranged for fair weather will be made to serve as well for foul.

COMING EVENTS

March 31-April 4, Salt Lake City, Utah—Automobile show in Auditorium skating rink.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 6, 7 and 8, Denver, Col.—Annual show in Mammoth skating rink.

April 6-11, New York City—New York Automobile Trade Association's carnival week.

April 11, San Francisco—California Automobile Dealers' Association's hill climb.

April 16-18, Memphis, Tenn.—Automobile show promoted by the Automobile Dealers' Association of Memphis, in the Auditorium.

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

May 5-6, Harrisburg, Pa.—Motor Club of Harrisburg's second annual endurance run.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

It may be unconstitutional for Congress to pass the bill designed to provide a Federal license, but for the first time the fact will occur to many men that a constitution is sadly in need of tinkering which permits 46 different parts of the same country to exact passports and admission fees from certain citizens of each other part who are supposed to be citizens of the whole country. The average American has been disposed to fancy that that sort of thing could exist only in Russia.

Senator Frelinghuysen, of New Jersey, whose home is in New York, has introduced a bill into the legislature of the State in which he does not reside, designed to permit insurance companies to insure automobiles. Mr. Frelinghuysen's office—in New York, of course—is part of an insurance company's establishment!

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INDIANAPOLIS CARNIVAL A SUCCESS

Postponed Parade a Monster Demonstration of Progress—Thousands Amused by the Obstacle Races.

Although the hill climb on Tuesday last was a big success, the postponed parade on Wednesday afternoon, 25th ult., was the star feature of the spring opening week arranged by the automobile tradesmen of Indianapolis. It was the greatest automobile parade ever held in the city. From two until three o'clock almost the entire city stopped work to witness the procession of cars that strung out for six blocks. The parade was designed to evidence the continued growth of the trade and it served its purpose well. The parade should have opened the spring carnival on Monday, but on account of expected rain, which did not fall, it was postponed until Wednesday.

The parade was the biggest demonstration witnessed in Indianapolis in some time. It absorbed the attention of the whole downtown district and was watched by from 50,000 to 100,000 people. By actual count 225 cars were in line, separated into three divisions. The first was composed of cars of the city, led by city officials and dignitaries. The middle division was made up of commercial vehicles, while out-of-town cars brought up the rear.

One of the odd features of the parade, and one that had historical interest because it reflected back on the days when the lumbering ox team dodged stumps in the National road, was the ox team outfit representing the National Furniture Co. The firm called it the "special horseless delivery." The interesting exhibit proved in the nature of an object lesson to the thousands of school children who witnessed the parade, for they see thousands of automobiles at the present time while few of them have seen an ox team actually in commission. The oxen and automobiles told a story of American progress in transportation.

The obstacle races on Thursday afternoon furnished considerable amusement to the 3,000 or more spectators that lined both sides of Capitol avenue. Both obstacle races—for touring cars and runabouts—were designed to test the skill of drivers in "ticklish" places. About 200 barrels were set in every conceivable position along the avenue and the competitors had to drive one block, turn around and go back to the starting point. Each barrel hit counted 20 points off a 500 per cent. score, and each second over 100 seconds counted one point against the contestants, as well as one point for every second less than 100 seconds, so that the events proved speed judging contests as well as obstacle races.

There were only two runabouts that did not touch a barrel, those being Bixby's Pope-Waverly and Chilson's Autocar. Bixby was awarded the event as he made the better score on time. Of the touring cars, Hicks, Cartercar, made the best score.

Cecil Gibson, Ford, won the egg cracking contest, although it was a close break between him and Adolph Staub in an Oldsmobile. The driver had to send his car over a two by four scantling, crack an egg and return without crushing the egg. Gibson showed that he had the best control and backed off the egg just before the chicken squawked.

The low speed on high gear contest was won in slower than a walk by Frank Staley, White, who took 2 minutes 56⅗ seconds to cover one block. Harry Hammond, Premier, was second in 1:47⅘. This event was a revelation to the Indianapolis police officials who had no idea that an automobile could go so slowly and still keep moving.

The "open house week" closed on Saturday night with a big smoker at the Grand and although no figures are forthcoming it is said that the carnival proved very profitable to the tradesmen, to such an extent, in fact, that they are talking of holding a big indoor show next year.

The Center of Attraction at Toledo Show.

Toledo dealers held their second annual show in the Coliseum in that city last week, opening on Monday night, 23d inst. For several days the exhibit that drew the largest crowds was that of the Central Carriage and Automobile Co., not that the cars shown by that concern were any better than some others, but because the Toledo papers had advertised a popular car for sale at $8.25. This unheard of price nearly caused the manager nervous prostration until he discovered the typographical error in his advertisement was the cause of such unlooked for interest in his exhibit. The cars shown at the show were: White, Mitchell, Maxwell, Cadillac, Franklin, Pope-Waverly, Stoddard-Dayton, Jackson, Ford, Reo, Pope-Toledo, Peerless, Winton, Oldsmobile, Rauch and Lang and Baker.

Dayton Dealers Have the Show Fever.

Dayton, Ohio, will have an automobile show in the Armory during the week of April 20 to 26, to promote which the Dayton Automobile Dealers' Association has been formed. The following officers were elected: President, G. G. G. Peckham; secretary-treasurer, A. M. Dodds. The firms comprising the association are the Dayton Automobile Co., Peckham Carriage Co., Borderwisch Auto Co., Smith-Clemens & Hopping, and the Speedwell Motor Car Co

First Show Held at South Bend.

South Bend's (Ind.) first automobile show was held in the garage of the Twentieth Century Motor Car Co. on Thursday, Friday and Saturday of last week, March 26th to 28th. The cars shown were the Studebaker, Buick, Tincher, Perfection, Simplex, Oldsmobile, Rapid, Woods and Apperson.

CARNIVAL SPIRIT IN NEW YORK

Interest in the Coming Joy Week on the Increase—Program of Features in the Celebration.

There is every prospect that when on Monday next, 6th inst., New York City will begin its celebration of the tenth anniversary of the introduction of automobiles into the metropolis that the "carnival week," arranged by the New York Automobile Trade Association, will prove a more momentous occasion than originally appeared probable. The program arranged, which will include a night parade, a hill climbing contest, a run to Bronxville, and a smoker for members and the trade participating in the carnival, holds much of general and spectacular interest and as the major events constitute a "free show," the public scarcely will fail to do its part in great numbers.

It is expected that the city's "automobile row," as a considerable length of Broadway is designated, will present a carnival aspect. Several of the sales rooms are preparing to spread themselves in the way of decorations, while "open house" will be observed in all the sales rooms and garages during the week.

The illuminated parade on Tuesday night should prove a pretentious affair with its five divisons, composed of Vanderblt cup cars and historic section of old cars; dealers' 1908 models, decorated cars, commercial vehicles, and lastly, the division composed of advertising features, which division is likely to provide a number of eye-pleasing surprises.

The parade will assemble at Broadway and Fifty-seventh street, at 7.30 p. m., proceeding south to Twenty-sixth street, thence into Fifth avenue and north to Fifty-seventh street, going west up Broadway to 110th street, passing in review before the judges' stand at Eighty-seventh street. The procession will turn at 110th street, and proceed south to Columbus circle, where it will disband.

The hill climb is made up of eleven events and will be held on the short 10 per cent. Fort George hill at Dyckman street, and the Speedway on Thursday afternoon, permission having been granted by the city officials for the use of this course. This will be the second time the course has been used for a hill climb.

On Friday the Trade Association will hold a run to the Gramatin Inn at Bronxville, where a dinner will be held in the evening, while the entertainment of the Automobile Club of America has arranged for a "carnival" to be held at its club-house Saturday night. In addition to an attractive vaudeville program some numbers will be contributed to the program by members of the trade, who have been invited to participate.

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FRELINGHUYSEN BILL ON ITS WAY

Jersey Senate Passes It with Proposed Taxation Reduced—Bill in Assembly Extends the Speed Limit.

Senator Joseph S. Frelinghuysen, of New York City, by choice, but of New Jersey by political preference, is as happy as possible under the circumstances. His revised automobile bill passed the New Jersey Senate on Monday night of this week, 30th ult., which by a peculiar coincidence, was the day previous to the meeting of the Associated Automobile Clubs of New Jersey.

If the Assembly concurs, the registration fees will be raised from the present rate of $3 for vehicles below 30 horsepower and $5 for those above 30 horsepower, to $3 for cars below 10 horsepower, $5 for those between 10 and 30 horsepower, and $10 for those of 30 horsepower or over. It increases the drivers' licenses from $1 and $2 to $2 and $4. In the original draft, introduced as an amendment to the present law, Frelinghuysen sought to raise the registration fees on a sliding scale—$3 for cars of 10 horsepower or less, $5 for cars of 20 horsepower or less, and upjumps of $5 for each additional horsepower. Likewise were the drivers' license fees increased proportionately from $1 and $2 to $25. As the Motor World stated last week the "come down" is of considerable magnitude.

Provision is made for licensing by blanket license cab companies operating adjacent to ferries, provision being made that they shall operate only within fifteen miles within the borders of the State.

Manufacturers' licenses are to be issued annually at a cost of $25 for five cars, according to the provisions of the new bill, but not more than five cars can be operated under one license. If it is desired to register more than five cars the fee will be $5 for each car so registered. The original new bill did away with manufacturers' blanket licenses. Motorcycles are to be taxed $2 per year and carry such identification marks as may be prescribed by the Commissioner of Motor Vehicles.

It is provided that all identification marks shall be provided by the State, and be changed annually; also, that the receipts from all sources shall be so distributed by the Commissioner of Public Roads that those counties that have improved their roads by the county act shall receive their pro rata share with those that have been improved by the State roads act. Nothing is in the new measure to prevent the charging of visiting motorists an admission fee to use the public highways of New Jersey, which however, Senator Frelinghuysen does not have to pay, as he issues his correspondence on a letter head bearing a New Jersey date line, although he purchases his stamps in New York City, where he resides.

Senator Frelinghuysen also introduced a bill on Monday, amending the insurance act permitting the organization of companies to insure against loss by automobile accidents.

Despite the passage of Frelinghuysen's revised bill by the Senate, the situation has become even more complex by the introduction of another automobile bill in the Assembly, one which increases the present maximum speed limit of twenty miles an hour to thirty miles and hour. Its sponsor is Representative Austen Colgate, and as he has been made a colonel and personal aide on the staff of Governor Fort, it would seem that the bill designed to permit a higher rate of speed has the endorsement of the governor.

Monday was an unusually busy day at the New Jersey capital. In addition to the passage of one Frelinghuysen bill and the introduction of another, J. B. R. Smith, Commissioner of Motor Vehicles, submitted his annual report to the governor for transmission to the legislature. That Commissioner Smith is not in favor of experimenting with present automobile laws was made plain. He believes that until some substantial agreement between the persons interested can be reached, it would not be sound policy to experiment further.

The report of the commissioner is interesting. It shows that during the past year there were issued 17,619 registration certificates and 18,085 drivers' licenses. The total income from these sources amounted to $80,054.87. The fines remitted to the State during the year aggregated $5,640. The total amount paid to the State treasurer was $85,694.87. The entire expenses of the department, exclusive of agents' fees, were $13,372.60. Under the law the gross receipts from all sources are turned into the State treasury, to be paid out upon the designation of the commissioner of public roads for the repair of the improved roads of the State, and the entire expenses of maintaining the department are borne by the Department of State.

The commissioner predicts that time and experience will result in concrete, practical suggestions for solving automobile problems, and goes on to say:

"The few points upon which substantial agreement has been reached are well understood. The question of fees paid for licenses and registration appears to be nearing solution, and there seems to be a general agreement that larger fees should be paid. The amount of the increase, however, is still a matter of serious consideration.

"Proper identification is the keynote to all efficient regulation, yet such identification should not be made unduly burdensome. The real value of the law must, in the end, depend upon the efficiency of those whose duty it is to enforce it. The final solution of both the identification and the inspector questions will doubtless be reached by easy stages."

COEY QUITS CHICAGO MOTOR CLUB

Not Big Enough to Hold Both Him and Picard, He Says—Cause of the Latest Quarrel.

C. A. Coey and Paul Picard have been fighting again. After being whitewashed of charges preferred by Picard, Coey has tendered his resignation as a member of the Chicago Motor Club, explaining that no club is large enough to hold Picard and him as members. This is not the first "fight" that Picard and Coey have indulged in to the amusement of Chicago's motor tradesmen, but without resulting in such hostility as preceded this action on Coey's part.

The charges and resignation are the outgrowth of the New York-Paris "race" and the reception of the competing cars in Chicago. Coey, as a member of the Thomas crew, according to the charges of Picard, declared that the Thomas had been sent over the wrong road from Michigan City to Chesterton, Ind., by Picard, representing the Motor Club, who had gone as far as Michigan City in his efforts to meet the racers and to pilot them into Chicago.

The Thomas car was stalled in the drifts between Michigan City and Chesterton two days and attributed their trials and tribulations to the failure of Paul Picard to transmit information about the condition of the roads, holding that they should have been sent via Furnaceville. Coey aired his grievances against Picard as a member of the Motor Club in advertisements, and the charges before the board of directors of the club resulted.

David Beecroft presided at the special meeting called to hear the charges and with him were George Greenburg, Harry Branstetter and Joseph V. Lawrence. President Donald was present by proxy. Coey was attended by Attorney Benjamin Levering and Charles E. Gregory. Paul Picard was unattended, claiming that he was uninformed of the trial and therefore unprepared.

Picard was the only witness called, and his explanation that he had not been informed of the trial resulted in considerable feeling being displayed by members of the directorate, sitting as judges. Branstetter brought matters to a climax by withdrawing from the meeting and the others voted to dismiss the charges "because of failure on the part of the prosecution to present sufficient evidence, but with the privilege of reinstatement."

The failure of Paul Picard to produce the advertisement upon which the charges were based was really responsible for the indecisive ending of the hearing. Immediately upon the decision, acting through Attorney Levering, Coey presented his resignation, explaining that no club was large enough to hold him and Picard as members.

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BRISCOE SAYS BUSINESS BOOMING

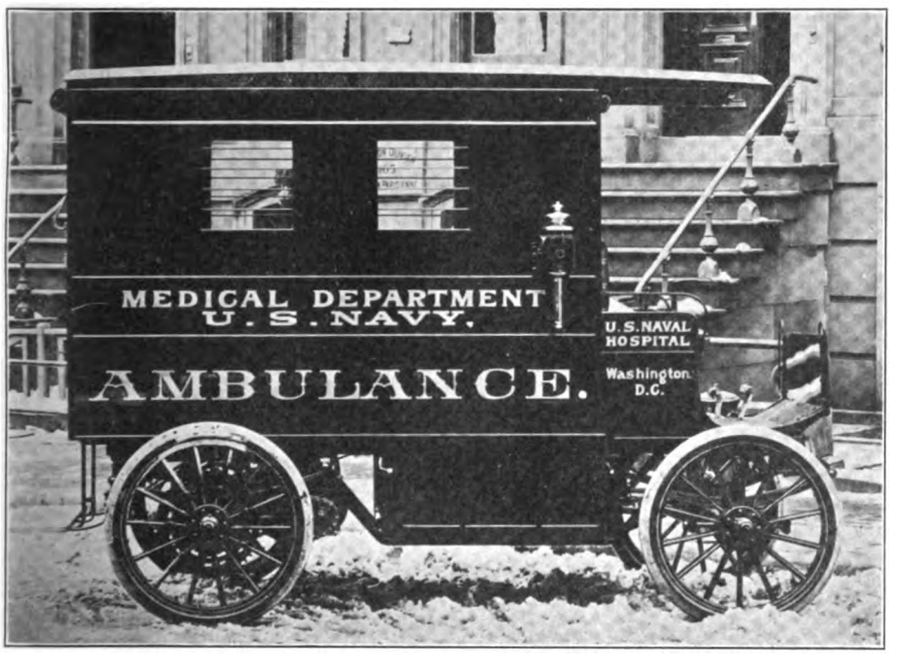
Actual Deliveries 50 per cent. in Excess of Last Year—His Views of Past and Future.

"We are reaping the reward of faith," said Benjamin Briscoe, president of the Maxwell-Briscoe Motor Co., in discussing the present situation. "The Maxwell factory has not laid off a man all season, but on the contrary has been working to capacity during the past few months of business depression, while other factories either closed down entirely or worked a short force.

"That we not only did not curtail our output but actually increased it over our original schedule was due to our unbounded faith in the stability of the country and of the automobile industry—at least that part of it engaged in the production of moderate priced cars—and that we have been unable to accumulate a single car against the heavy Spring demand is proof that our optimism was justified. Ordinarily, we plan to produce several hundred cars over the delivery demands in the months from November to March, but this season we have been hard pressed to keep up with current orders.

"At the time when the breaking of a few banks threw some of our competitors into a fit, and pessimism was rife, I looked the situation over and came to the conclusion that that was our time to make a ten-strike. I was certain of the ultimate recovery of trade and I believed the period of depression would be short-lived. On those grounds we determined to push work in all four plants so as to have Maxwell cars ready for delivery early—a most important advantage to be gained over those of our competitors who were standing idle or undecided as to what to do. Then I figured that, as almost all other factories had cancelled orders for material—indicating that they would turn out only about half as many cars as we had previously estimated they would—there would be still more room—and more demand—for Maxwells. So we increased our output 25 per cent.

"Our faith is being rewarded in a way that surpasses our fondest hopes. Our sales since August 1st show an increase of 42 per cent. over those of the same period last year and those of January, February, and March surpasses last year by 50 per cent. When I say sales, I mean deliveries—not merely orders. Seems as if this showing gives the lie to the too general supposition that the automobile industry is to suffer more than other branches of commerce from the temporary depression. For my part I predict that the total business of 1908 will exceed that of 1907 by greater or as great a margin as that of 1907 was in excess of the year before. In other words, I believe the automobile has become a necessity in the every day life of practically every successful business and professional man."



STUDEBAKER ELECTRIC AMBULANCE SUPPLIED TO FEDERAL GOVERNMENT

Uncle Sam Buys Another Ambulance.

The Studebaker Automobile Co. recently delivered to the Medical Department of the United States Navy at Washington, D. C., a handsome electric ambulance. The body, which is of the special design shown by the accompanying illustration, is fitted upon a regular Studebaker 1500 pound capacity chassis. The ambulance has a speed of twelve miles per hour and a radius of forty miles on one charge of the battery.

OLDS REPORTS RUSH OF ORDERS

Business Away Ahead of Last Season and No Let-up in Sight—His Opinion of Situation.

"We already have received orders for five hundred more cars than the 1908 contracts made with our agents called for, many of which dated as early as last September, when there was no indication whatever of a money scare," says R. E. Olds, president of the Reo Motor Car Co.

"Confronted with this condition, and with orders coming in constantly from new and unexpected sources in every section of the country, we have been obliged to very materially increase our capacity for the building and shipment of Reo cars. Our factory employes now number 1,100. These have worked steadily all winter, and now we are employing additional men in order to make good absolutely our positive guarantees of prompt deliveries.

"These facts fully justify the extensive plans which we laid earlier in the season. It will be recalled that we announced to our dealers and to the trade in general, when the money scare was at its height in October, that there would be no halt in the Reo factory, but that it would continue to build cars up to its maximum capacity. We believed then, as we do now, that the causes which led up to the recent industrial upheaval were not fundamental, for no material changes had been wrought in our governmental policies, state or national. Having undergone the period of recuperation and readjustment which was but a natural outcome of the many excesses and extravagancies to which, we, as an abnormally prosperous nation had permitted ourselves to get into, the business pendulum has been steadily swinging toward the normal. The recuperative process, like recovery from a severe nervous shock, has necessarily been slow, but has been as certain as sunshine follows showers.

"Our last November and December shipments far exceeded those of any previous year. January and February shipments were equally gratifying. The result is that we have not only sold every car contracted for when prosperity was at its height six months ago, but our factory is now actually being crowded to supply the scramble for high-grade, moderate priced cars, which we fully anticipated months ago would follow the temporary period of adjustment."

Automobile Ambulance for Kings County

The New York branch of The White Co. has recently sold an ambulance to the Kings County Hospital of Brooklyn. The ambulance consists of a standard 30 horsepower chassis with a body similar to those of the ambulance previously furnished by The White Co. to the Federal Government.

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BIG CROWD AT ATLANTA HILL CLIMB

All the Events Closely Contested and Unmarred by Accident—The Only Mishap a "Between the Acts."

Under the scorching rays of the sun, and standing in dust an inch thick, 3,000 persons watched the second annual hill climbing contest on the Stewart hill, Atlanta, Ga., Saturday afternoon last, 28th inst. Nearly 500 cars lined up the sloping roadway. Only one accident occurred and that did not mar the contest as it happened after an event, when the competing cars returned down the hill. One of the cars got away and broke several lamps and fenders on cars lining the course before it finally stopped. Lieutenant Robinson, of the county police was in the car until it bumped another. The lieutenant executed a flip-flop and fetched up against a convenient lamp. It broke his fall but cut his chin.

Altogether the affair was a success; there was not a hitch from start to finish. Timing was done by electrical apparatus and the mounted county police rendered efficient service in keeping the course clear. Only one protest resulted—in the free-for-all, the time made by the winning car being questioned by John K. Kiser, who finished second. As all the watches recorded alike it is doubtful if the protest will be allowed. Stewart hill measures nine-tenths of a mile.

Although the events were not scheduled to start until one o'clock, spectators gathered at the course as early as 11 o'clock—and brought their lunches with them. Atlanta's best society arrived later, in automobiles, and without the lunches. According to local information "some of the most famed beauty of the South and State was there, and automobile enthusiasts had come from near and afar," so that Atlanta's second annual climb doubtless was the most "scrumptious" ever held.

All the events were closely contested, most notably the class for cars costing $2.000 and under, in which Joe Landers, Reo, beat C. E. Travis, Cadillac, by the narrow margin of one fifth of a second in 1:29⅗. J. P. Grady, Pope-Hartford, won the class for cars under $3,000, covering the incline in 1:06⅖; he was second in the $4,500 and under class, and third in the free-for-all. C. C. Rooney, Thomas, was first in the $4,500 and under class, finishing in 1:07⅖. The fastest time of the day was made in the free-for-all, which went to A. L. Almand, Stearns, in 51⅕ seconds. This time was protested by John K. Kiser, who finished second in a Thomas Flyer in 54 seconds. The class for cars costing $1,000 and under went to William Oldknow, Buick, in 1:20⅕, with M. C. Huie, Ford, second, in 1:28. The summaries:

Cars Costing $1,000 and Under.

1	William Oldknow, Buick	1:20⅕
2	M. C. Huie, Ford	1:28
3	J. H. Bryant, Ford	1:31
4	Joe Landers, Reo	1:32
5	C. A. Fleming, Maxwell	1:34⅕
6	J. L. Richards, Ford	1:34⅘

Cars Costing $2,000 and Under.

1	Joe Landers, Reo	1:29⅗
2	C. E. Travis, Cadillac	1:29⅘
3	J. H. Bryant, Ford	1:33⅗
4	M. C. Huie, Ford	1:34
5	William Oldknow, Buick	1:34⅗
6	C. A. Fleming, Maxwell	1:36⅕
6	B. R. Padgett, Jr., Ford	1:36⅕
7	F. M. Inman, Buick	1:42

Cars Costing $3,000 and Under.

1	J. P. Grady, Pope-Hartford	1:06⅕
2	Henry J. Lamar, Jr., Oldsmobile.	1:11⅗
3	L. E. Fain, Stoddard-Dayton	1:13⅖
4	M. C. Huie, Ford	1:16⅕

Car's Costing $4,500 and Under.

1	C. C. Rooney, Thomas Flyer	1:07⅖
2	J. P. Grady, Pope-Hartford	1:11
3	J. H. Bryant, Ford	1:16

Free-for-All.

1	A. L. Almand, Stearns	0:51⅕
2	John K. Kiser, Thomas Flyer	0:54
3	J. P. Grady, Pope-Hartford	0:59⅘
4	M. C. Huie, Ford	1:15

Automobile Track Planned for Zion.

Salt Lake City automobilists will have an elaborate club house and a mile banked cement track, involving an outlay of about $11,000, if present plans materialize. According to advices from Zion it is proposed to erect a large club house near Beck's Hot Springs, 150 acres of ground already having been purchased, it is stated. A mile track will be constructed of natural cement, of which there is a mountain close by the proposed site. The track will be constructed to hold a speed much less than a mile a minute with six cars abreast. A grandstand to accommodate 7,000 also will be constructed. None of the promoters of the project are mentioned, but it is stated that the movement has been under way for two months, the only reason that it was not announced before being that the promoters wanted to be sure of the project before making their plans public.

Fall River Automobile Club Incorporates.

The Fall River Automobile Club has been organized and incorporated in the Massachusetts town of that name, with the following officers: President, DDr. George L. Richards; vice-president, Early P. Charlton; secretary, Arthur S. Phillips; treasurer, Albert A. Harrison; directors, Earle P. Charlton, Robert Marshall and John P. Hilton, for three years; George L. Richards, Edward J. Jennings, and Edmond Cote, for two years; H. C. Talbot, G. D. Flynn and Edward B. Remington, for one year.

Automobile Club of Philadelphia Election.

The Automobile Club of Philadelphia has elected these officers: President, Powell Evans; vice-president, Stedman Bent; secretary and counsel, S. Boyer Davis; governors, Stedman Bent, S. Boyer Davis, George B. Linnard, Isaac Starr, Henry P. Bailey, Powell Evans and Jacob B. Seeds.

FOR FIRST AMERICAN SPEEDWAY

Utah Plans One from Salt Lake to Salt Air—Big Interests Unite and Will Organize a Corporation.

A $40,000 private automobile speedway along the tracks of the Salt Lake and Los Angeles railway from Salt Lake City to Salt Air beach is now an assured thing. At a preliminary meeting held by the Real Estate Association of Salt Lake City last week, the first steps were taken toward perfecting a permanent organization, and a large block of stock was subscribed for by those present at the meeting.

It was decided to incorporate a company for 500 shares at a par value of $100 per share. Four hundred shares are to be placed on the market and one hundred shares held in reserve in the treasury. J. R. Walker and Jacob Moritz were appointed a committtee to canvas the automobilists to dispose of the stock.

J. E. Langford, manager of the Salt Air Beach Co., was present at the meeting, representing the railroad, which he said had authorized him to give the right of way along the tracks for the automobile speedway, and also said that the company was ready to sign an agreement to keep the speedway in repair for five years and to police it. The railway company also will haul the shale for the construction of the road, providing the speedway is put into operation before the opening of the Salt Air beach season. It will be constructed from a lime formation, found on the shores of the lake near Salt Air, which is practically dustless and packs like natural cement, and with two or three coatings of oil, will make an ideal speedway, it is said. The nearness of the source of supply will contribute largely to rapid construction.

The speedway will be fifteen miles long, with a mile straightaway. It will be exclusively for automobiles and motorcycles, with no limit to speed. Those who do not belong to the association which will build it will be charged toll for its use, and it is thought that enough toll and percentages from the railway company on race meet days can be collected during the season to more than keep the road in repair. A garage and stalls will be built near the Salt Air pavillion, and a platform will be extended to the pavilion in order that cars may be run to the entrance of the resort.

The Salt Air Beach Co., which is closely allied with the railway company, has also announced that it will build a mile track for automobile racing at the resort, and that work upon it will be started as soon as the speedway becomes a realty.

The proposed Salt Lake-Salt Air speedway is worthy of note for the fact that it wil be the first automobile speedway of its kind in America.

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BIG COST OF FREE MOTORING

How "Don't Care" Usage Piles Up Expenses—Figures that Would Make Private Owners Gasp.

In very many respects the man who uses a city owned automobile is a fortunate individual. He has the pleasure of its use without having to consider the cost or caring what the bills amount to. While, undoubtedly, it is true that the general public look upon the city's motor cars as a costly appendage of the various officials who are supplied with automobiles, it also is true that very few persons know, even approximately, how much of the taxpayers' money is required to meet the expenses of some official work and very much "joy riding."

Obviously the cost of maintenance of the automobiles varies greatly in the different departments. Much depends on the chauffeur, and the care he gives his car, but it plainly is seen that mileage is an all important factor in the total expense of running. If—and the "if" is a great big one—the city's cars were used only by city officials, when performing the duties of their respective positions, the cost to the taxpayer would not compare unfavorably with the maintenance cost of the private owned equipage. But the wear and tear on the cars that belong to a municipality vastly exceed the wear and tear on cars which are driven by chauffeurs who are required to observe the traffic regulations, who by this very observance are relieved from the necessity of sudden and violent stopping, which is an important factor in the upkeep of a car, when traveling through the streets where the traffic is heavy.

Manifestly it is impossible to compare the cost of maintenance of city owned machines with those that are the property of private individuals. But figures extracted from the official records of New York City showing the running expenses of the automobiles of various departments of New York City, give the citizen the opportunity of knowing just what the city officials are spending on this one incidental of their position, and are valuable as demonstrating the expense of maintaining an automobile when operated by men who, for obvious reasons, "don't care what it costs" and who, generally speaking, have no regard for the abuse to which it may be subjected.

In the year 1907, the Department of Street Cleaning spent $19,039.31 in maintaining four cars—an average cost per car of $4,759.83. As this department houses its cars in its own stables, and does its own repairing, thereby doing it at actual cost, and as the department furthermore is in position to make many of the parts that from time to time are required, in its own machine shops, it is apparent that enormous mileage, or unusual abuse, were encountered in the course of the work, or that an amount of "joy riding" was indulged in that, to say the least, is amazing. Great as it is, however, this amount does not cover the cost of the transportation of the department officials to whom are assigned the four machines. For in addition three of these officers have horse drawn vehicles and drivers exclusively for their use. The cost of their getting about must therefore cost the tax payers a sum that simply is prodigious.

The Police Department, with three touring cars, and one recently acquired runabout, spent $8,632.50 in 1907, which amount covers maintenance, but not original cost. Unlike the Department of Street Cleaning, this department had garage bills to pay and had its repairs done by outsiders, which involved a far greater expense than would have been incurred had they been able to do the work themselves. The cost of repairs alone was over $3,500, whereas the Street Cleaning Department kept four cars running for considerably less than this sum, having spent but $2,739.68; though this latter item does not include the salary expense as the repairing was done by chauffeurs, of which there are ten. In the Police Department the cars are driven by regular patrolmen, who are detailed by the commissioner for the work, their salaries being paid out of the fund for police duty. Among other items there is also the record of an expenditure of $22.50 for a fur coat for the first police deputy, but whether this is charged to repairs, renewals or supplies, the books do not show.

In contrast to the amount spent by the police and street cleaning departments is the comparatively small cost of maintenance in the Department of Health. As far as could be determined by a close inspection of the books in the office of the comptroller, this department spent in 1907 $11,328.68, which, though more than was spent by the police department, is a smaller sum per car, as the health department is credited with possession of eight automobiles, and if the money was divided amongst all of them the average per car would be but $1,416.08, a third of what it cost the street cleaners, and but half as much as the police spent. There are, however, only four chauffeurs employed—as such—by the Department of Health, so that if all of the eight cars were in use they must have been driven either by the persons to whom they were assigned or by employes who received their pay for some other duty that was not performed while they acted as "automobile engine man"—the city's official designation of those employed to handle its motor cars.

Of all the automobiles that have been attached to the Department of Health, or, for the matter of that, to any city department, there has been none that is even mildly comparable with an ambulance, which was bought with the intention of using it as a source of income. The idea was to charge each patient $2 who might be transferred from one point to another, and as it was used for contagious diseases, there is no suspicion that it ever was even remotely employed for "joy riding." This automobile ambulance cost $7,600, and was used for one year, the chauffeur receiving $1,200 and "find." During the year, 802 patients were carried, presumably for $1,604. Then the ambulance was sold at auction for $165. The purchaser of it sold it inside of five minutes for $265. According to the books, the cost to the city for the use of this ambulance for one year was over $8,800.

But for economy, real, simon pure, downright all-to-be-praised economy, the Department of Water Supply, Gas and Electricity must be singled out as an example of all that is good and pure and holy in the matter of running and maintaining automobiles—that is, if figures don't lie. An exhaustive search of the entire records of that department as shown in the books of the finance department for 1907, reveal an expenditure of but $1,749.06, which divided between five cars gives an average cost per car of only $349.81, about the price of one complete set of tires. The accounts of the department, however, fairly bristle with items like this: "John H. O'Brien as commissioner, amount of requisition for incidental expenses, $500," but as no explanation is attached showing the nature of the "incidentals" it would not be fair to assert that any or all of these $500 "incidental" entries apply to the automobile account. The accountants in the comptroller's office could offer no explanation of the "incidental" items, and they could not explain the absence of gasolene and other charges usually found in the accounts of departments owning automobiles; in fact, Mr. O'Brien's "incidental expenses" are so numerous and so uniformly placed at the round sum of $500, that an official examiner might bring up some interesting details were his probe inserted very deeply.

In the absence of any data showing the mileage of the different cars it is impossible to determine with any degree of accuracy whether the running cost is abnormally high or whether the mileage was made at a cost per car mile which would compare favorably with the cost of individual owned machines.

Another interesting item in the expense account of Commissioner O'Brien's department is one . . . . runabout, $995. The name of the car is contained in the records and the list price is more than $1,700, which makes it appear that the purchasing power of some individual in the department is sufficiently marvelous to cause comment or that———.

It is hard to believe that the latter can be the case. One thing that is responsible for an unusually high price which the city pays for almost everything that is bought for its use is the length of time which elapses before the bills are paid. A merchant must wait from two to six months before he receives the money for goods

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sold, or services rendered, to the municipality. Because of this delay, and because too of the amount of red tape involved, rendering bills in triplicate, conforming to certain forms in making out statements, giving their wares certain titles, etc., there are many business houses which not only do not want the city's patronage, but refuse absolutely to sell to it. On this account it frequently becomes necessary to enlist the aid of a third party, a middleman, who can buy of the maker and is willing to sell to the city and carry the account for an indefinite period. Naturally he does not do this sort of thing because of philanthropic motives and sometimes, when the dealer's discount from the maker is too small to compensate for the nuisance of conforming with the city's rules and waiting for the bill to be paid, the government is compelled to pay even more than the list price, and perhaps the middleman can not be fairly condemned for it. In the matter of automobile parts this sort of thing frequently occurs, as it is necessary to obtain the parts of a certain make of machine, from the manufacturer of that machine, and if he will not carry the account then some one must be paid to carry it, as the needed articles are made by only the one maker.

Since 1904 the various city departments have been supplied with 81 cars at a total cost of $195,003.50. Many of these have found their way into the junk pile and have been sold at auction, as the law compels, and brought prices that would about pay for junk. Some of the "auctions" are "fixed," some are honest, but it is seldom that a car brings anything like its real value when sold in this way.

The following figures show the expenditures of the various departments for cars during the past four years:

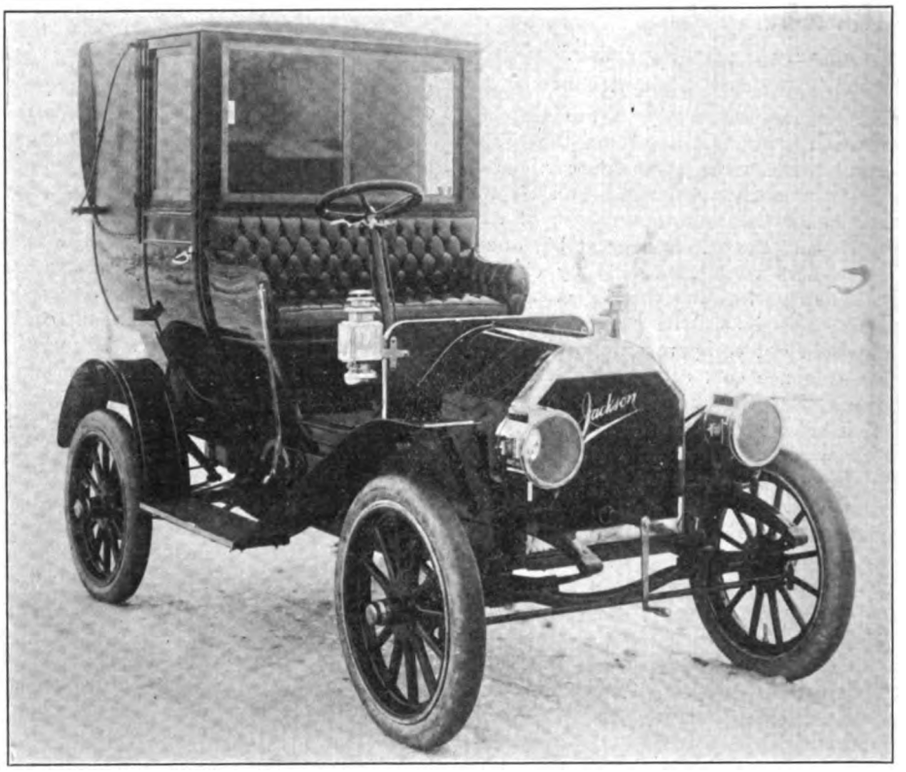
Department.	No.	Cost.
Dept. of Street Cleaning	8	$21,714.00
Dept. of Public Charities....	2	6,000.00
Board of Education	1	4,700.00
Fire Department	7	21,250.00
Dept. Water Supply, Gas and Electricity	5	7,277.00
Police Department	6	15,185.00
Dock Department	2	5,775.60
President Borough of Manhattan	3	14,000.00
Department of Parks	6	17.340.00
President Borough of Brooklyn	12	16,040.00
President Borough of Richmond	7	13,086.90
President Borough of Queens	3	8,800.00
President Borough of The Bronx	1	4,000.00
Department of Correction ..	1	2.500.00
Department of Bridges	4	8.142.00
Department of Health	8	19.908.00
Department of Finance	5	9.285.00
Total	81	$195,003.50

It is a matter of considerable notoriety that "joy riding" plays no small part in the usage of not a few of these cars. It is common talk that one of them is used by an official's wife for shopping and other personal purposes, and not long since one of the prominent city officials was arrested while using a city car in New Jersey.

NEWEST AMONG THE TAXICABS

Jackson Enters the Lists with an Attractive Vehicle—Prominent Details in the Design and Construction.

Thanks to the stimulus of the increasingly popular taxicab, a considerable number of makers have already produced vehicles answering to this description, while the rapid sequence of additions to their ranks points to the probability of a time not far distant when every maker with pretensions to anything like an inclusive line, will number at least one such vehicle in his catalogue. The most recent acquisition to the ranks of the American built taxicab—which must invariably be read as synomous with light closed town car—is the newly announced product of the Jackson Automobile Co., Jackson, Mich., which is here illustrated. Unlike many other vehicles which have been produced, the new Jackson is a vehicle built on thoroughly economical lines, designed for economical service, and though, as the makers explain, in no sense a "cheap cab," it is yet sufficiently modest in its properties to be appealing at once to the private individual who has regard for the cost of his motoring mileage and the corporation which is forced to do so in order to realize the all-ellusive profit on its investment.



JACKSON TAXICAB, THE LATEST COMER

The cab is built on a light chassis having 90-inch wheel base and 30-inch wheels, shod with 3½-inch tires. It is hung on full elliptic springs behind, and semi-elliptics in front, and is propelled by a 16-horsepower, two cylinder motor, driving through a planetary change speed gear, and propeller shaft, to the live rear axle. The transmission is geared for a speed of 25 miles per hour, and the control mechanism is so designed that it may be actuated largely by means of the feet, thus facilitating the management of the vehicle in close street traffic.

The body takes the form of a neat and compact landaulet with inside carrying capacity for four passengers. Its general appearance is considerably relieved by the absence of complicated external mechanism either of propulsion or control, and its serviceable and unostentatious exterior is an able recommendation for it as a worthy member of a rapidly growing class of serviceable vehicles, adapted either to the use of individual owners or to the service of the general public.

Punctures Frequent on Chicago Taxicabs.

Are Chicago's "horse cabbies" seeking to disable their rivals in the business, the drivers of the taxicabs, by puncturing the tires of the latter vehicles? Chief of Police Shippey intimates they are doing so, by commanding officers to keep a sharp lookout for "some persons who are maliciously jabbing knives and nails into the tires of the taximeter cabs." T. J. Doyle, secretary of the Cab Drivers' Union, resents the aspersion and says that the taxicab tires are cut because the drivers are new men and haven't sense enough to keep from running over broken glass.

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SOLVING THE HAULAGE PROBLEM

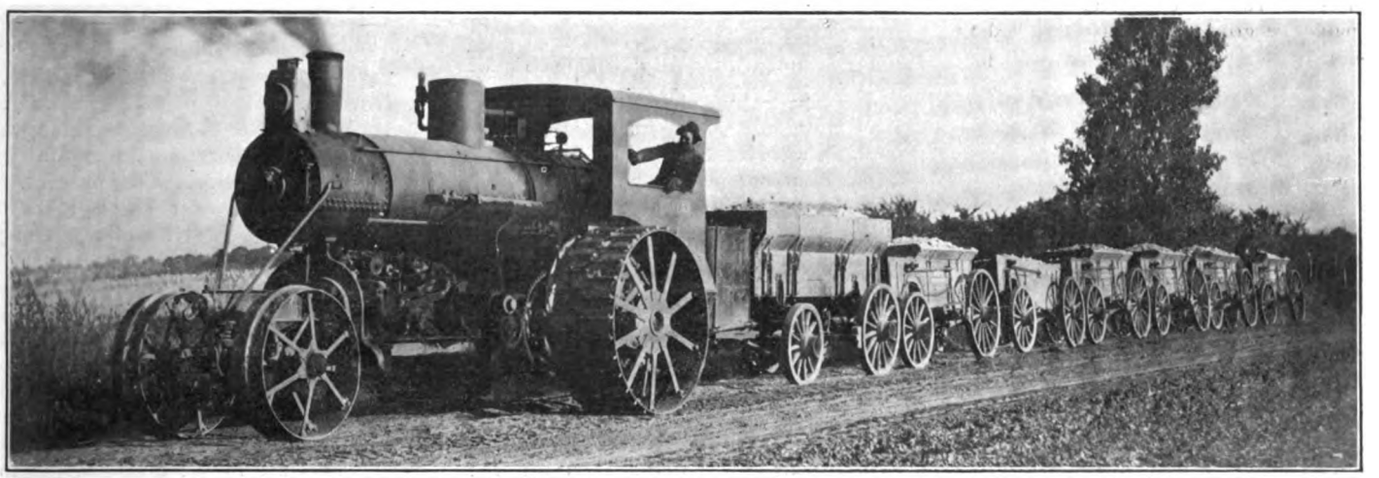
Most Recent Development of the "Road Locomotive"—Practical Evidence of What It May Become.

While the haulage of merchandise over the common highway is generally recognized as one of the most important phases of the transportation problem of the future, the fact that it has assumed proportions of considerable magnitude already in some parts of this country, as well as abroad, is not generally known. The use of motor-drawn traction trains has been applied with varying degrees of success in England and on the Continent, for many years. In America, particularly in the Western States, it is by no means uncommon, though not as general as in Europe, where highway conditions are more favorable and railroads less accommodating in the matter of rates and schedules. Even with the common American highway conditions to contend against, however, the transportation of heavy loads over considerable distances is a distinct and economical possibility which is neither to be questioned nor ignored.

The accompanying illustration from the Good Roads Magazine, affords tangible proof of what may be done with commercial success. The tractor shown, is an Avery undermounted road engine, differing from the more or less familiar traction engine in that it is designed primarily for haulage purposes, and not as a portable power plant capable of autolocomotion. The combined load of seven trailers represents a total of 35 tons. The view was taken on the Pocona Hill road, near Omaha, Neb., and the burden is that most "dead" and inelastic of all cargos, crushed rock.

Figured on the normal allowance of one ton as the average load for a team of horses, it will appear that the outfit in question is replacing no less than 70 horses and 35 drivers, the evident economy both in investment and operation being very great. Unlike most "commercial motor vehicles," the engine is evidently a direct derivation from railroad practice, and is a road locomotive in the fullest sense. Far from being in any way a relic or copy from railroad or traction engine practice, however, it represents the most recent development in a line which is receiving far more attention than the average "man in the street" is at all aware.

Compared to this, and the 20-ton gasolene-electric road train shown at the recent automobile show in Madison Square Garden, not to mention other enterprises of a similar nature, either in practice or under way, the undertaking of producing a single vehicle capable of transporting loads of five tons, more or less, seems comparatively simple. Those who are accustomed to predicting a great future for the commercial motor vehicle, would do well to bear in mind that that "future" is by no means a distant one, and that much which is highly creditable already has been accomplished. How great the ultimate achievement will be is impossible to foretell.



AVERY ROAD ENGINE DRAWING A LOAD OF 35 TONS

Californian Creates a Motor Truck.

Arthur Mills, of Ione, Amador, County, Cal., has invented a motor truck which he hopes to market with the supervision and financial aid of W. H. Rutledge and others, under the name of the Sacramento Motor Truck Co. The most striking features of the vehicle, which is a sort of family affair, having been commenced by Mills's father prior to his death and later finished by the son, are its close resemblance to a horse-drawn dray, and the fact that it is equipped with ordinary wagon wheels, shod with steel tires. It is driven by a 15 horsepower gasolene engine mounted in front, and connected with the rear wheels by a system of bevel and spur gearing, the final connection with the driving wheels being by means of pinions and annular gears with independent clutching devices by way of differential provision.

EVIL EFFECTS OF COMMISSIONS

Their Relation to Tire Wear and Cost of Maintenance—Demoralizing Influence on Chauffeurs.

"I used to wonder why my tire bills were so large," remarked a man who had owned several cars. "They were absolutely abnormal—not the price of the tires but the frequency with which I had to buy new ones, and as the maintenance of my car, aside from the tires, was reasonable, I set out to find out why I was getting such poor service from tires that were of excellent reputation, high priced and bought direct from the makers; I add that last to explain that I was not patronizing cut rate houses and buying job lots.

"I looked into the subject pretty thoroughly; talked with friends who had had more experience with automobiles than had I, and finally hit on a clue which led to the entire explanation. My chauffeur was a rascal, as some of them are, and I learned that he was getting commissions from the tire makers on all tires that he bought. Acting on a tip given me by a friend, I watched his driving without letting him know that I was doing it, and I saw that he would drive in car tracks as much as possible or run two wheels on the trolley slot whenever he could. That brought some light to me and when I found that he would drive close to curbs so that the tires would rub them, and that in crossing the bridges he hugged the guard rail of the roadway which tore the shoe whenever a nail or rough, wooden projection was encountered, I fired him. Then I went to the manufacturer and had a heart to heart talk.

"I told him that I was not especially interested in the subject of giving 'presents' to chauffeurs, if that was all there was to it, but when the chauffeur put me to large expense so that he could receive small presents, I was vitally interested and asked him

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what he was going to do about it; and just to put the thing in a proper light for him to see it, I told him that I had about concluded that his tires were no good, that they did not give me the mileage that other tires did for my friends and, I added, that if I hadn't discovered that the fault was with the chauffeur he would have lost a patron and that I would, in all probability, have advised against using his tires when others asked my opinion of them.

"Naturally he saw the light. He said that he hadn't thought of it in that way before and he promised to pay no more commissions to chauffeurs in my employ. Since that interview I have had no excessive tire bills and I compel my chauffeur to get tires at this concern's store. And the chauffeur, finding nothing in it for him, has no object now in giving them obnormal usage."

Chauffeurs Organize "for Protection."

Cincinnati's chauffeurs are aroused over the founding of a school whose promoters claim they can teach a young man to be a proficient chauffeur in 24 lessons of two hours each. It caused the professional drivers of that city to meet last week for the purpose of forming a protective association. James B. South presided. He declared that the proposed association is not to be a labor union and does not propose to dictate as to hours or wages. "Our purpose is mainly to have an organization where we can take united action in any case where the rights of chauffeurs are threatened," he said. "The chauffeur is more than merely a driver of a machine; he is an experienced mechanic." A committee was decided to to draw up a constitution for the Chauffeurs' Association, as the new organization will be called.

To Clean Light Colored Leather.

Automobiles that are upholstered in light colored leather frequently present an appearance of untidyness which can be easily overcome. To clean and remove stains from light colored leather the following mixture may be used with good effect: Boil a pint of milk, let it cool and add one drachm of hydrochloric acid and one drachm of sulphuric acid. Shake well and then add half a drachm of oil of lavender, one pint of vinegar and the white of one egg beaten to a froth. Keep in a tightly corked bottle. Rubbed on the leather with a soft cloth it greatly improves the appearance and removes the stains.

Convenient Tank for Testing Tires.

For testing tires, an ingenious Indiana dealer has the water trough built into the floor of his shop, a tin tank fitting into the opening thus made. The tank thus is removable for cleaning. The trough is provided with a lid fitted with a ring. A trough of the sort, being flush with the floor is always instantly available and at the same time is never in the way.

INFLATING PRICES TO CUT THEM

Bargain House Method of Making Big Discounts—Their Alleged "List" in Comparison with Regular Trade Lists.

Charles E. Miller's new catalog, made up of 216 pages and, if anything, more complete than any of its predecessors, made its appearance this week. Miller makes the issue notable by suggestive reference to the so-called discount houses, whose tricks of increasing list prices in order to make their discounts appear enormous is not wholly a new one.

"The so-called 25 or 50 per cent. supply houses cannot quote this discount from the prices in our catalog," says Miller's publication, "although they may be able to quote a big discount on joblot or second hand material, or from fictitious or inflated list prices. We guarantee to furnish new material at standard prices and do not substitute or offer something 'just as good.'"

Just how the "list" prices quoted by the discount houses are inflated, was demonstrated by the comparison with the prices printed in the catalog of one of them with the manufacturers' actual list prices. The instances are rare where the advertised "list" in the so-called cut rate catalog is not vastly in excess of the list published by the makers of the goods. In other words, the "list" quoted by the price-cutters is a "list" which exists only in their minds and is published with the intent of fooling purchasers into the belief that they are getting an enormous discount, which is far from true.

In making the comparison of prices, care was taken to compare only standard articles of the same quality or size. The prices in both colums refer to the same article, not to articles made by different makers. A few of the comparisons follow:

	Cut Price "List."	Makers' List.
Horn No. 1	$25.00	$20.00
Horn No. 2	3.00	2.50
Reeds	.50	.30
	.30	.20
Bulb	1.60	1.00
	1.00	.80
Register	4.50	4.00
Thermos	7.50	5.00
	5.00	4.50
Dry cells	.50	.30
Battery connection	1.00 per doz	.35
Spark plugs	2.00	1.50
Pliers	1.75	.60
	1.00	.50
Ammeter	2.50	2.00
Wrenches	2.00	1.20
	1.50	.90
	1.00	.60
Jack	6.00	5.00
Albany grease	1.50	1.00
Tire tool	9.00	6.00

How Spare Shoes Can be Kept Dry.

The importance of keeping dry the spare shoes carried on an automobile is, of course, generally realized. But evidently very many drivers conclude that to cover a shoe with a tire case is all that is necessary to keep the moisture out; yet this is not all that is required. Nearly all tire covers are so arranged that, while the back or body of the cover is in one piece, there are two flaps. The object of this arrangement is to permit of the openings being in the same direction, i. e. down. The upper flap buttons over on the rim side of the tire and it overlaps the lower flap which also may be buttoned down—if one may use that expression. In putting the covered tires in the tire holders care should be taken to have the openings in the flaps on the under side, in which position rain will not run in on the shoes nor will they become wet during the process of washing the car.

Manographe Appears in America.

Hugo C. Gibson, one of its members, has presented to the Automobile Club of America, a Hospitalier-Carpentier manographe, an instrument of recent invention which produces, by photographic process, diagrams showing accurately what takes place within a motor cylinder, so far as the pressure is concerned.

A ray of light is projected upon a prepared plate by a vibrating mirror. Its horizontal movement is controlled by a flexible shaft, which is connected directly to the crankshaft, or in such a way that it revolves in unison with same. The vertical movement of the beam of light is controlled by the pressure in the cylinder, the inside of which is connected with the instrument by a tube. The combination of these two movements causes the beam of light to travel in an irregular line upon the prepared plate, recording the pressure at every point of the piston's movement. The diagram thus produced enables the engineer to determine the horsepower which is being exerted within the cylinder walls, the pressure at the inlet, exhaust and compression points, and to note also whether the valves are properly timed.

New Material Produced for Brake Lining.

Thermoid is the name of a new brake lining which is pronounced by a number of automobile makers who have tested it to be about the best thing of this kind yet produced. It is made of a combination of asbestos interspersed with layers of rubber and strips of thin copper wire. In factory tests a section of the material has been placed over a pulley with a sixty-pound dead weight attached, the pulley traveling about thirty-one miles per day. After a run of over 40,000 miles the strip of Thermoid showed no appreciable wear, being simply worn smooth. It is claimed that it will outlast even the metal brakes themselves, and so confident are its makers, the Trenton Rubber Mfg. Co., 2900 Grove street, Trenton, N. J., regarding its merits that they are willing to send samples and submit to the hardest kind of tests.

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INVESTIGATING THE WHEEL SLIP

Another Series of Experiments at the Brooklands Motordrome—What They Appeared to Demonstrate.

Wheel slip in connection with the other problems of motor car design, is a subject which, oddly enough, has not as yet come in for its full share of attention. There can be little doubt that considerable slip actually does take place, nor that its existence is an accurate measure of the principal cause of tire wear. But the absolute amount of slip which takes place under ordinary circumstances, and how it is governed by conditions of speed, load, and road surface, never has been investigated to its full value. A beginning in this line has been made, however, on the English Brooklands course, and by the irrepressible S. F. Edge. That these trials are only a very small beginning, and really show little or nothing of the underlying truth of the matter, is apparent from published accounts of them.

The trials just completed, which are announced as the forerunners of a series of more complete tests to follow, consisted merely in driving a car over the Brooklands course at varying rates of speed, and observing the number of revolutions made by the engine in each case. To this end, a special form of revolution counter was attached to the two-to-one shaft of the engine of a racing car, and the machine was first towed over the course, each lap of which, when followed at a certain distance from the pole measures about 2⅝ miles. After the first lap had been made in this way, the succeeding laps were run off under the machine's own power, the recorded revolutions made for each lap, being set down for comparison.

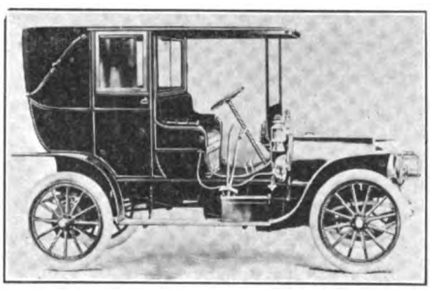
Counting the slip as zero for the lap when the car was towed and no power was being exerted by the engine, it was found that at 30 miles per hour the difference in revolutions between that and the first lap was 40, that is to say, that the engine had turned over 40 times more when driving the car at 30 miles per hour than when the car had been idly towed by another machine. Similarly, when running at 60 miles per hour, the "slip" was found to have amounted to 72 revolutions for the single lap.

It is to be inferred that the gear ratio was unchanged during the entire test, and that the clutch was permitted to seat firmly at all times, though neither of these facts is brought out in the reports. Furthermore, as the car was run always in the same direction, and as nearly as possible in the same track, it is to be inferred that differential action due at once to the curve of the course and possible deviation from the normal path, was largely neutralized. The fact that the slip at 40 miles per hour, proved to be less than that at 20 miles per hour, however, tends to discredit the entire performance. The results of the test are as follows:

Test No.	Speed. m.p.h.	Engine Revs.	Slip in engine revs.
1	towed	3,732	—
2	slow	3,748	16
3	20	3,776	44
4	30	3,772	40
5	40	3,770	38
6	50	3,790	58
7	60	3,804	72

Franklin in the Taxicab Market.

The H. H. Franklin Mfg. Co. has entered the field of the taximeter cab with a new closed body machine, the G landaulet, a 16 horsepower motor car, which is the lightest landaulet on the American market. A number of these are now being tested in



city service. The short wheel base of this motor car, only 92 inches, makes it an exceedingly handy machine for crowded city traffic. It is built on the chassis of the Franklin 16 horsepower touring car, with progressive transmission and jump spark ignition from a battery, along the lines of the 28 horsepower landaulet. It is upholstered in soft black morocco, as being more sanitary for public service. This machine weighs only 1850 pounds, and sells for $2,500.

Whirling Liquid as Speed Indicator.

The Miloscope is the designation of a new speedometer which just has been placed upon the British market, and which is constructed in accordance with a principle which it is claimed has not before been applied to such a use. The idea is merely that of whirling a body of liquid in a closed container and using the height to which it is driven upon the sides of the vessel as an indication of its speed. The entire part of the device containing the liquid, revolves as a unit, there being no vanes or other parts which turn at different rates of speed. Therefore the problem of preventing leakage is a comparatively simple one. There is but one ball bearing which supports the moving part, and because of the simplicity of its construction and the small weight in motion, the indications are practically "dead beat," and accurate. It is friction driven from the front wheel of the vehicle in the usual way, the resistance of the flexible shaft being practically the only friction encountered. The graduations are for speeds of from zero to 50 miles per hour, and the scale is 4¼ inches long.

FIRE PRECAUTIONS IN PAINT SHOPS

Their Necessity Emphasized by Large Aggregate of Recent Losses—Careful Cleaning up as a Safeguard.

Recent losses from fire occurring in automobile paint shops, approximating $150,000, directs attention anew to a very dangerous and an exceedingly expensive oversight on the part of those having charge of such establishments, remarks a well known journal of the carriage trade. Spontaneous combustion is no new creature of the fire underwriter's fancy. It is well known in carriage painting annals, and is properly regarded as a large and unmistakable source of danger by carriage painters everywhere.

At best, the automobile paint shop, which is not infrequently, through manifold exigencies, some undesirable section of the city garage, is not conducive to safe painting operations, being beset by automobile repair men of various branches and equally various inclinations relative to matters of safety, and holding in its more or less ill adapted depths specially inviting recesses for the development of unexpected combustion.

On this account, not to mention others which intervene, the automobile painter is confronted with a situation which he can ill afford to disregard. Without permitting location of shop, its environment, equipment, or arrangement of furnishings, to influence his better judgment in respect to safeguarding the premises, it is his first duty to exercise the utmost diligence in keeping the shop clean, at least during the hours it is unoccupied by the workmen, of all waste, greasy, or oily, or paint smeared rags or fabrics of whatever sort. As a matter of fact, such fabrics should not be allowed to lay or be thrown around promiscuously during working hours, much less during the hours when no vigilant eye or keen-scented olfactory is abroad. All paint-smeared, or oil and turpentine or benzine saturated cloths, waste, burlaps, etc., are more or less dangerous, the first named being possibly the least so of all. Oil and turpentine combinations are, if anything, the most dangerous of all, with benzine, on account of its explosive nature, standing a close second. Even excelsior, tow, and common soft wood shavings containing wood filler, will ignite upon slight provocation. It is, therefore, a safe policy at all times and under all conditions to keep refuse matter, including all of the above-named, closely picked up, and, while left in the shop, stored in metal buckets with close-fitting covers attached. These should invariably be removed from the shop at the close of every working day, and the contents disposed of. Such precautions are inexpensive and besides being conducive to safety, foster a spirit of cleanliness.

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DON'T WANT TO SET FOLKS CRAZY

Massachusetts Legislature Rejects "Continuous Noise" Bill—Law Passed Permitting Hill and Road Contests.

Out of the big grist of automobile measures poured into the hopper of the Massachusetts legislative mill only three thus far have passed through the chute known as the committee on roads and bridges. These include one that not only was unjust to owners of motor vehicles, but also was of a character which did not recommend it to any one but the most rabid anti-automobilist. This was the bill calling for some device on automobiles and motorcycles, to sound continuously when the vehicles are in motion. The committee reported "leave to withdraw," and the report was accepted after some debate. During the discussion Representative Cook of West Springfield made his first speech of the session, in defense of the report. Replying to an inquiry by Representative Burr, of Boston, as to reasons for the adverse report, Cook said, with some vigor, "The reason was that we didn't want to set everybody in the State crazy. If anybody has got any good reasons for this bill it's about time we heard them."

Another of the bills reported on, and with a recommendation for its passage, was the one permitting the mayor of a city or the selectmen of a town to grant permits under which automobiles may be driven on specified highways for a given length of time at any speed. This bill was asked for by the Worcester Automobile Club to enable it to revive its annual hill clomb, but under it there is a possibility of other road contests. This bill went through both branches of the Legislature and last week was signed by Lieutenant-Governor Draper.

The other bill reported on was that of E. Wentworth Prescott to provide that all vehicles using the highways after dark should carry lights. The report was referred to the next General Court. The automobilists are strongly in favor of this law and have urged its passage for several years past. At the hearing this year there was no opposition, but the committee seems to feel that a little more time should be given the rural population that it may learn the benefit of such a law. There is another "lights" bill before the committee, but it is probable that having reported adversely on Mr. Prescott's bill it will take similar action on the other.

The majority of the bills still under consideration are those proposed by the Safe Roads Automobile Association. These have been referred to a sub-committee for the purpose of making a redraft which shall include the desirable parts of all the different measures.

That part of the Governor's inaugural address which dealt with automobiles, in which a sliding scale of registration fees is recommended, has not yet been acted upon, but it does not seem probable that the Legislature will make another change in the registration law, when the new law passed last year has hardly begun to be effective. Last year the House was strongly against the sliding scale of fees and the Senate was for it. This matter has been considered jointly by the committee on roads and bridges and the committee on taxation. After the experience of the past year during which the automobile owners have paid the State from $5 to $12 each in registration fees another change to a sliding scale, which would bring with it still higher cost of registration, would be a blow to the automobile business in Massachusetts.

New Jersey Clubs in Annual Session.

Directors of the Associated Automobile Clubs of New Jersey met in annual session at Trenton on Tuesday, 31st ult., elected new officers, and passed one or two resolutions.

They endorsed the bill introduced in Congress providing for the erection of a bridge over Newark bay and a bill pending in the legislature which authorizes freeholders to issue bonds for the repair and betterment of roads.

The principal business transacted was the election of new officers, George W. Post, of Paterson, being chosen to succeed Wilbur F. Sadler, of Newark, as president. W. C. Crosby, of Newark, was elected first vice-president; Walter F. Edge, of Atlantic City, second vice-president, and Horace A. Bonnell of Newark, secretary-treasurer. Bonnell succeeds John E. Gill, of Trenton, who refused a renomination because of other duties; Edge takes the place of W. E. Garritt, of Newark.

The constitution and by-laws were amended, making dues payable annually instead of semi-annually. The report of the retiring secretary showed that more than 200 members have been gained in the past month and that three new clubs have been added, making a total of eleven clubs in the association.

Cocks Bill Killed in Committee.

The Cocks bill, which sought to facilitate inter-state travel by providing a Federal license for automobiles, and which was fathered by the American Automobile Association, has received its quietus. As was expected, the House Committee on the Judiciary has decided to report it adversely on the grounds that it is unconstitutional in that it infringes the police powers of the states.

The Continental Caoutchouc Co. has set aside $1,000 as an added incentive for good performance in the Briarcliff race on April 24th. The money will be apportioned, of course, among the contestants making the best showings on Continental tires.

STEEL MAN TO BE HEAD OF A. C. A.

Entirely New Slate for Coming Election of Officers—Ticket Made up of Representative New Yorkers.

Judge E. H. Gary, executive head of the United States Steel Corporation, will be the next president of the Automobile Club of America, Colgate Hoyt, the present incumbent, having declined renomination. Excepting the hold-over governors, of whom Albert R. Shattuck is one, an entirely new board of officers will assume direction of the organization when elected on April 14.

The new slate comprises a representative list of successful New Yorkers, and chiefly because Robert Lee Morrell figures as the nominee for the third vice-presidency, there are those who see in the new ticket the means of lifting the wet blanket which has served to detract from the popularity of the big club and the cheerfulness of the big club house. But in nearly every instance it is found that it is mainly the wish that is father to the thought. Judge Gary's running mates are as follows:

Vice-President, Henry Sanderson, banker; second vice-president, William F. McAdoo, president Hudson & Manhattan Railroad Co.; third vice-president, Robert Lee Morrell; treasurer, Edgar L. Marston, of Blair & Co., bankers; governors, Commodore Cornelius Vanderbilt, Commodore New York Yacht Club; General Horace Porter, late Ambassador to France; Frederick D. Underwood, president of the Erie Railroad; Wm. Pierson Hamilton, of J. Pierpont Morgan & Co.; Waldron Williams, chairman of A. C. A. Bureau of Tours; Colgate Hoyt, present president of the club; Dr. S. Skaats Wheeler, president Crocker-Wheeler Co.

The governors who will hold over are: Winthrop E. Scarritt, Dave Hennen Morris, John Jacob Astor, George F. Chamberlin, and Albert R. Shattuck.

For World Discussion of Road Damage.

That old bugaboo of the injury which rubber tires inflict on highways is likely to receive its final and authoritative settlement next fall when an international congress of highway engineers will be convened to debate the matter and decide upon a remedy for the evil, if evil it prove to be, and of sufficient magnitude to warrant the adoption of special measures to overcome it. Because of the tremendous outcry which has been raised against the automobile on account of its alleged destructive propensities in this respect, France has issued a call for the meeting, which is to be held in Paris commencing October 11. Director Page of the office of public roads, United States Department of Agriculture, will represent American interests in accordance with an invitation recently extended through the French embassy at Washington.

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THOMAS CAR SAILS FOR VALDEZ

American Leader in New York-Paris "Race" Off for Alaska—Other Contestants Leave Repair Shops.

Chapter One of that gay French fantasy, the New York-Paris "race," is practically finished. The only American entrant, the Thomas, after a week of exhibition and overhauling in San Francisco and Seattle, was shipped yesterday from Seattle for Valdez, Alaska, where it is expected to arrive April 6th, ready to commence what is by all accounts the most nearly impassable stage of its prodigeous undertaking yet encountered. Local pessimists and wise men from the north say the passage of even one corner of Alaska will prove impossible at this time of year; that the trails are not wide enough to permit passage of automobiles. George Scheuster, who now is captain of the Thomas crew, says it is by no means impossible to attempt it. The foreign contenders are still toiling toward San Francisco.

After the unpleasant experience at Kelton, Utah, where a delay and shipment back to the Union Pacific railroad shops at Ogden was made necessary, the Zust car and its gallant crew traveled in better luck until near Daggett, Col., where 30 hours were lost through a mistake in the course. Los Angeles was reached on Tuesday, the Italians having come through by way of San Bernardino, instead of following the Thomas through Mojave, Cal., a longer and better route thereby being secured. Just outside the city, however, an unusually high bump in the road, and the low fuel tank of the car came into contact, with the result that a lay over of a few hours was required to patch up a formidable hole in the reservoir. Santa Barbara was passed yesterday afternoon, and the Italian colony at San Farncisco is preparing a Festa for to-night.

Thursday of last week, the De Dion was overturned in the mud near Spring Valley, Wyo., and was only righted after eight hours strenuous labor on the part of the French crew, part of the work being carried on after dark by the light of a bonfire.

Later reports show that the party is making better time than either of its predecessors, Goldfield being reached on Tuesday, the 250 miles of desert between Ely and Tonopah having been traversed in 13 hours —beating the Thomas' time by a day and a half, and that of the Zust by several hours. As usual Goldfield declared a dividend and drank itself dry over the arrival of one more New York to Paris "racers." With difficulty St. Chaffray and his team escaped after the festivities and got to Rhyolite.

Thursday, the Protos came to grief five miles west of Point of Rocks, Wyo., and as a result of a broken driving shaft, had to be shipped back to Ogden, to the shops of the ever-obliging U. P., for repairs. Four days later, it was on the road once more, as good as new—or better. It began to look as though the cars that reach Paris will be mostly of American manufacture and will bear the U. P. imprint. Monday's trip was 70 miles long. Granger, Wyo., the stopping place for the night, was left behind early the next morning. It was a repetition of the trials which had beset the other cars, however, for at 8 o'clock Tuesday night, the German lieutenant and his compatriots were reported to have gained just 20 miles on their course by dint of many more miles of circumnavigation, and to be at Carter—deep in the snow. They are now at Evanston, Wyo.

Gas-Electric Railway Car Tested.

From New York to Baltimore in 1 hour and 45 minutes is the schedule which was forced upon the Strang gasolene-electric railway car, "Irene," on its trial trip last Sunday, 29th inst., when a party of seventy railroad men, promotors, experats and bankers, were carried over the Pennsylvania railroad in the latest product of the Strang Gas-Electric Car Co., of Garwood, N. J. The car, which is the first product of the company, has a record of a mile in 58 seconds and it has bee hoped to improve upon this had not the fog interfered to cut down the running time permitted by the train despatcher. The car is driven by a gasolene engine of special construction, with an electric transmission, and storage batteries as an auxilliary equipment for equalizing the load. The car is of special form, 65 feet long, and weighs 55 tons. Five duplicate cars are in process of construction at the company's plant. Sunday's excursion was made in the interests of the system as a means of economy in suburban and interurban railroad traffic. Representatives of a number of eastern roads were present.

Route Book for Southern Tours.

The touring bureau of The White Company just has added No. 6 to the White Route Book library. The new issue covers the route from Philadelphia over the National Highway as far west as Springfield, Ohio, and then southward through the Southern States to Savannah. This book gives the first definite data ever published on the roads of Kentucky, Tennessee, Alabama and Georgia, and the road directions for following the National Highway through Maryland, Pennsylvania, West Virginia and Ohio are herein given for the first time with accuracy and detail. It is believed that this issue will do much to revive interest in the National Highway and to turn the tide of tourist travel toward the South. The new route book, besides giving detailed directions for over 1,800 miles of road, contains articles descriptive of the route, embellished with numerous illustrations. There is also a fine double-page map of the country traversed. As usual, tourists may obtain copies of the book free of charge.

CHICAGO IN CARNIVAL SPLENDOR

Decorated Parade at Night Ushers in a Week of Festival—Brilliant with Flowers and Electric Light.

With a decorated parade for a curtain raiser, in which pyrotechnics—oratorical and roman candle—siren horn music, and some little excitement played a prominent part Chicago's first "spring carnival" was ushered in last Saturday night, 28th ult. While not as large as the parade at the Indianapolis carnival a week ago, the Chicago parade was more spectacular, occurring as it did at night.

The procession started at 7 o'clock from the New Southern hotel on Michigan avenue with nearly 100 decorated cars in line and wriggled through several streets until it wound back to Michigan avenue for the final review by the judges.

By a process of elimination which lasted about one hour the judges finally got the competitors sifted down to fifteen. The judges considered that the most beautifully decorated car was the Thomas, driven by C. A. Coey, which was awarded first prize. The car was a fairyland of white and red carnations, twinkling with myriads of miniature incandescent lights, while a swaying balloon, bearing a design of the American flag in red, white and blue chrysanthemums, surmounted the car. A propeller in front slowly revolved with its twinkling lights.

The White car driven by Miss Mildred Plew, fully sustained its name. It was dressed with festoons of white roses and little lights, while the tonneau carried a mass of red and white roses. Miss Plew was a symphony in white, and caught the judges' eyes for second prize.

Carl Metzger's Woods electric brougham was a mass of white roses, while in front of the car, suspended on long slender wires was a flock of white doves, with long streamers of white ribbons extending back to the seats. It got third prize, while ten other cars received honorable mention.

Whatcom County Owners Orgonize.

Twenty automobilists last week formed the Whatcom County Automobile Association at Bellingham, Wash. There are 75 owners in the county and it is expected that nearly all of them will join the only automobile club in the county. These officers were elected: President, Dr. F. G. Chute; vice-president, Charles Daw; secretary, Ray Cissna; treasurer, Fred Offerman; trustees, the officers and Dr. Compton.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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HORSEPOWER AT REAR WHEELS

Tests on A. C. A. Dynamometer Give Some Interesting Results—Some Wide Variences with Motor Ratings.

That horsepower, the makers' rating, horsepower the actual, and the horsepower delivered at the rear wheels of the car, are subject to an even greater variation than commonly is supposed, has been demonstrated in a most spectacular manner by a series of tests which have been carried out on the dynamometer which early this year was installed at the headquarters of the Automobile Club of America. In the course of power tests applied to 17 different cars it has been demonstrated further that the most efficient performance of only a fair majority of the cars is obtained on the highest speed, while in a surprising number of cases the most powerful effort of the motor was obtained on either the first or second speeds.

Results of the tests, so far as obtainable, cover only the make, style and nominal power of the cars, and the maximum power and speed, as well as the gear on which it was developed. Efforts to obtain the powers developed on the other speeds, in every case, which would prove most instructive beyond a doubt, were met with a refusal at the office of the club secretary. Broadly speaking, the information published by the club goes to show a much greater variation in current design as regards the adaptation of gear ratios and transmission mechanisms than would appear to be the case from a casual comparison of the design and construction of the various machines. Incidentally it points directly to a desire on the part of the makers to cultivate either speeding powers or hill climbing ability, in the several cases, rather than to any great uniformity of effort in either direction. The fact that in no case, with the possible exception of the runabout, is the direct purpose of the car considered in this connection, also is interesting to observe.

That the publcation of the results of these and other tests may lead to an entirely new understanding of the meaning of horsepower and of its application in the motor car, goes without saying. Further, that it may lead to a deeper study of transmission efficiencies than has yet been undertaken also would seem to follow.

Two of the cars developed more power at the rear wheels than the nominal capacity of the motor. Ten of them, however, revealed as much power as would be expected, supposing the loss by friction in the transmission to be 25 per cent., which it is ordinarily reckoned to be for purposes of rough calculation. Eight of these developed power at the wheels in excess of that amount, showing either a considerable underrating of the motor or very high transmission efficiency.

In fact, because of the vagaries commonly practiced by manufacturers in the matter of engine rating, as well as the lack of common knowledge as to the exact ratio of power lost in the transmission of one or another type, these figures are not subject to analysis with any degree of exactitude. In any case, the horsepower and speed developed represent the difference between the actual power of the engine and the resistance of the transmission. Where neither value is known exactly, the result must be accepted rather as an isolated fact, than as a conclusion which is worth more than its face value. Were it possible to obtain the performance of the cars under all driving ratios, more satisfactory information might be deduced from the tests. The purely illustrative value of the results, however, is not in the least affected by this objection.

The figures in the following table are self-explanatory with the single exception of those given in the fourth column, which represent the power which would be delivered at the rear wheels in each case were the transmission efficiency 75 per cent., or were three-quarters of the total power of the motor delivered to the wheels. The vehicles tested were all stock machines in road condition. The Delahaye landaulet was one of the two-cylinder taxicabs in daily use in and about New York City. The results are as follows:

Make.	Style.	Nominal h.p.	Nominal h.p. at Wheels.	Max. h.p. at Wheels.	Miles per Hour.	Gear.
Mercedes	runabout	40	30	29	42	4th
Pope-Hartford	runabout	30	22½	25½	36	3d
Westinghouse	touring	35-40	30	30	25½	2d
Stoddard-Dayton	runabout	40	30	43	43	3d
Packard	runabout	30	22½	33	12	1st
Arrow (6-cyl.)	touring	40	30	30	43	3d
Arrow	touring	28-32	24	21½	11	1st
Simplex	touring	50	37½	44	46	3d
Packard	limousine	24	18	20¾	13	1st
Stoddard-Dayton	runabout	40	30	24	44½	3d
Oldsmobile	runabout	35	26¼	15	34½	3d
Stevens-Duryea (6-cyl.)	touring	30	22½	26	40	3d
Delahaye	landaulet	8-9	6¾	5¼	25	3d
Locomobile	limousine	15-20	15	13½	7	1st
Thomas	runabout	40	30	23	40	3d
Peerless	touring	30	22½	33	13	1st
Packard	touring	30	22½	35	28	2d

DECEPTIVENESS IN TOP MATERIAL

Gormully Puts Purchasers on Their Guard —Pointers Concerning Some of the Fabrics that are Used.

In purchasing automobile tops the majority of individual buyers, as well as a large proportion of automobile dealers, depend too much upon the general appearance of the article offered, failing to enter specifically into the quality, etc., of its constituent parts, says A. R. Gormully, purchasing agent of the Maxwell-Briscoe Motor Co. It is human nature, apparently, to take advantage of our fellow humans' failings, and some top manufacturers are, unfortunately, only too willing to take such advantages wherever possible.

The majority of tops to-day are manufactured either from one of the several makes of artificial leather or of rubber-covered duck or drill. Tops manufactured for Maxwell cars, as most of our readers probably know, are made of an artificial leather which is known to the trade as No. 1000 X Moroccoline. Many top makers are, we find, manufacturing tops which they designate as moroccoline tops, but which are, in fact, made of a lower grade of material, although it is marketed under the trade mark of moroccoline. These cheaper grades of moroccoline can be purchased at 25 per cent. less than No. 1000 X; hence, if the dealer is offered moroccoline tops at a low figure he should insist upon knowing of what grade of moroccoline the tops offered are manufactured.

Rubber drill is, also, subjected to the same variations; this material, in fact, is made as light as 20 ounces, whereas the drill used in the manufacture of Maxwell tops and storm fronts is 32 ounces; the difference in cost between these two weights be- 30 cents per yard. Such substitution, of course, affords a great saving to somebody, and dealers purchasing rubber tops and storm fronts should insist upon knowing the weight of material used.

Another case of the same character is the flexible glass or transparent celluloid used in top and storm front lights. This material is made in various thicknesses ranging from 5-1,000 of an inch up. The celluloid used in Maxwell tops is 15-1,000 of an inch thick and lists at $1.10 per sheet, whereas thinner material can be purchased, down to the 5-1,000 material, which costs only 55 cents per sheet.

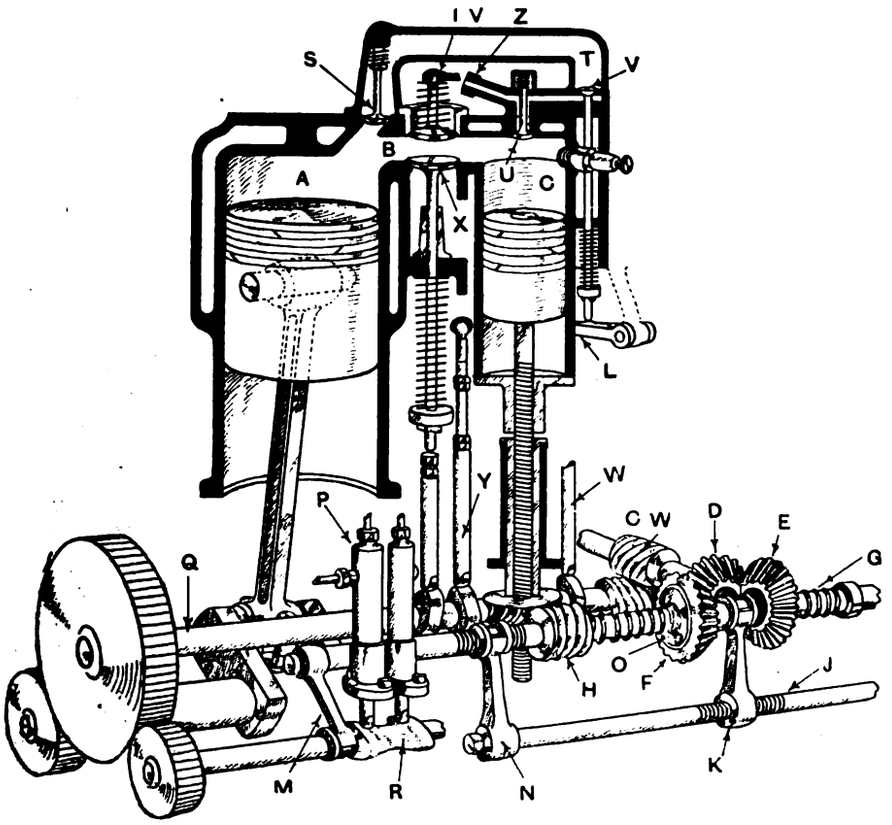
The bow sockets or supports of the top are another item to which dealers should give attention; these being made in several weights; as a general rule they come in two weights for automobile usage, viz., medium and heavy, and in a very light weight known to the carriage trade as "buggy weights." These light sockets are often used where price is the main consideration.

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IGNITION AT CONSTANT PRESSURE

Ingenious Application of the Method in a Foreign Motor—An Unusual Feature in the Construction.

Internal combustion motors of the type commonly employed in automobiles are ordinarily constructed on the principle of ignition at constant volume, or in other words, are designed to fire the working charge when the piston is stationary after the end of the compression stroke and on the point of commencing its descent on the working stroke. Many variations of this plan have been brought about without in the least altering the cycle of operations, while in a few cases, attempts have been made at introducing other cycles in which ignition is supposed to take place at constant pressure. A novel application of the second method is found in the Roche motor, a recent foreign invention, which has been unearthed by the Autocar.



In this machine, which possesses the unusual feature of a combustion chamber which is entirely separate from the working cylinder and connected to it by means of an open port, governing is performed by varying the volume of the combustion chamber in question, this, in turn, being effected by moving a piston up or down in a small auxiliary cylinder which serves this purpose. As a result of this method of governing, as well as on account of the forcible injection of the fuel into the combustion chamber after compression has taken place, an unusual amount of complication is requisite. In this respect the motor appears to be less practical than the common type. In view of the fact that it is claimed to develop its maximum efficiency at anywhere from half and three-quarters to full load, instead of at full load only, its design is worthy of close study.

In the accompanying illustration, which is an ideal representation of the machine in question, the various organs are shown in half-section regardless of whether they lie in the same plane or not. From this it will appear that the main inlet valve, IV., which is operated mechanically from the lifter, W, by means of a long rocker arm, not shown, admits pure air only to the working cylinder, A. Following the suction stroke, this charge of pure air is compressed, forming a high pressure in the auxiliary combustion chamber, C, and the transfer port, B, joining it with the working cylinder. A small volume of air also is compressed in the tubular chamber, T, above, through the poppet valve, S. During the latter part of the compression stroke, the pumps, P, driven by the cams, R, force small quantities of fuel and water through the nozzle, Z, into the small chamber over the combustion chamber, C, adjoining T. The pumps are designed to give a variable lift, and their action is governed by the fork, M, controlling the position of the cams, R. The object of injecting the small quantity of water is to guard against pre-ignition.

At the instant of commencing the working stroke, the mechanically operated inlet valve, V, is raised by the rocker arm, L, permitting the air which has been compressed in the chamber, T, to enter the smaller chamber below whence its contents of mingled fuel and water is at once discharged through the automatic valve, U, to the combustion chamber, ignition immediately taking place. The immediate rise in pressure at once forces more air into the small chamber, T, so that an injector effect is secured, which serves to force all the fuel into the combustion chamber during the early part of the working stroke. The greater part of the action of combustion takes place in the chamber, C, so that the air present above the working piston and in the transfer port is used only as a medium of expansion and to cool the gas, thereby rendering the motor cooler in operation than otherwise would be the case.

The method of governing the size of the combustion chamber is as ingenious as that of accomplishing the cycle itself. The cam shaft, O, drives through worm gears, a transverse shaft which is geared to the commutator, the double distributor for water and fuel, and also a lubricating pump. The bevel pinion, D, at its other end, drives the equal and opposite bevels, E and F, which are mounted loosely over the shaft, G. The worm, H, which is mounted on this shaft, meshes with a gear which is fixed relatively, but runs on a thread cut in the rod of the auxiliary piston, traveling in the cylinder, C, so that any motion of the worm, H, serves to vary the volume of the combustion chamber. By means of suitable clutches the bevels, E or F, may be connected temporarily with the shaft, G, and the desired movement of the auxiliary piston effected in either direction. Two small cone clutches, O, actuated by the fork, K, against the pressure of suitable springs, are employed to connect the bevels to the shaft, G, as required. To throw either one into connection, the small shaft, J is rotated through the usual lever mounted on the steering column, this motion serving to shift the fork, K, along it and engage the proper clutch. This causes the shaft, G, and the gear, H, to revolve, moving the auxiliary piston. At the same time the rotation of the shaft, G, causes the second fork, N, on the rod, J, to draw the rod far enough in the opposite direction to release the clutch from engagement, thus making the movement of the auxiliary piston directly proportional to the movement of the hand lever at all times.

The novelty of the cycle here introduced will be observed to be two-fold. First, only pure air is compressed, the combustible gas afterward being introduced into the combustion chamber and fired at relatively constant pressure. Second, the compression is varied to suit the demand for power, increasing as the quantity of fuel diminishes in proportion to the volume of pure air. In this way, combustion is made complete at every cycle, and the efficiency is maintained at a high point throughout a considerable portion of its range.

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DEALERS WERE ALL EASY MARKS

And Willieboy Had Numberless Joy Rides —Those Who Got Stung Let Him Sting Others.

There is a certain young man in Cleveland whose name, although it is known, shall be mentionless—who is laying up great stores of trouble for himself. Already a number of local dealers are hot upon his trail and when the storm breaks—woe be unto him!

This smooth young man, with his glib tongue and apparently earnest manner, has had a number of dealers "standing upon their heads" for a week or so, to employ a slang phrase. In turn he has neatly "stung" every one of them, and they have passed him along, each hoping to see the next dealer fall into the trap.

The young man began operations three weeks ago and since then has placed "orders" for a half dozen cars, although in each case. it is not strange to relate, the cars was never delivered. His plan of procedure was cunning and crafty. His father lived in the West, so he said, and he disired to purchase a high powered car—a good one, mind you, a high class, well made machine, capable of putting speed records to shame. Also, a friend of his was coming to town in a week or so, and his friend would purchase the same kind of car.

With all this in mind, and forgetful of ride grafters. how the misguided agents did work to land that double sale! Night after night such and such an agent would take the earnest young man for long rides, with the thought of two big commissions constantly in mind. Night after night the young man's evenings were spent in a riotous round of demonstrations, theatre box parties with dinner and wine afterward, so it is said to be truthfully recorded on the expense books. The young man was having an ideal time.

One unused to such lavish entertainment and, say, a bit unscrupulous, can hardly blame the young man. and so he went from one dealer to another. In numerous cases he "placed his order," but found that "papa was out of town"—referring to the mythical western city—and couldn't be reached by wire. The agents paid the freight on the telegrams and waited for papa to return and send the check on to Willieboy to hand over to the lucky agent.

For nearly two weeks this has kept up and the only reason that Willieboy has not been arrested is due to the fact that every agent that has been "stung" realizes it, and knows that he would be the butt of ridicule from his fellow dealers if the secret got out, so he has kept quiet about it and waited returns from the other dealers.

Maybe Cleveland dealers are "easy graft" and maybe they are not, but it is stated that by actual count, the quiet Willieboy youth has successfully "worked" seven dealers, each of whom has been in business long enough to have his eye teeth cut. After many demonstrations and theatre parties one agent. bolder than the rest, began a quiet little investigation, and determined to hunt up the young man's father. That's how the secret became known. Strange to say, the respected parent did not live in the western city, but right in Cleveland. He was quick to disavow any hope of having any car in the family, and said his son was "only having a little fun," which amusement, however, he did not evince any desire to pay for.

At present the dealers who have been "stung" and have been "put wise' by the charitable and investigating tradesman, say they will not prosecute the young man, but woe betide him if he happens to "repeat" in a moment of recklessness of absent-mindedness, upon some dealer who "is on."

Automobile Thief Ran Into Trouble.

California, which runs Indiana a close race in the discovery of prodigies, has a new one. He is a self-confessed thirteen-year-old automobile thief and was turned over to the police after being captured in the Osen & Hunter garage in San Jose. Clifton Croyer took a car belonging to Dr. N. H. Chamberlain and drove it from Oakland to San Jose, stopping at the garage for water. He could give no satisfactory answer to several questions and the garage men notified the police who, just a few minutes before, had received notification of the theft, by the Oakland officials. Young Croyer, who said he was a member of the Young Men's Christian Association at Stockton, would not say why he took the car, but said that he intended abandoning it and returning home to his mother in Stockton.

Relay Flight with Stolen Automobiles.

Two prosperous looking men coolly entered the $5,000 car of William G. Costin and drove away, while the latter and some friends were enjoying a play at a Pittsburg theatre one night last week. As a general rule beggars are not choosers, but this pair was exceptional. The purloined car, being stalled in the mud at Glenshaw, they resolved to look around for another relay. Entering the tool house of the American Natural Gas Co. they steered the $2,000 car of George Weittner out to the road and hurried off. Both cars were discovered, abandoned, the next morning, but no trace has been found of the thieves.

Saratoga Organizes an Automobile Club.

Although one of the centers of horse racing during the summer. Saratoga, N. Y. will have an automobile club, the Saratoga Automobile Club having been organized last Saturday with thirty members. Clarence B. Kilmer was elected president and Edward B. Ashton, vice-president.

AUTOMOBILES PREFERRED TO GEMS

So They are Blamed for Failures in the Jewelry Trade—How an Alleged Victim Explains It.

Nowadays it is the fashion to blame the automobile for failures in many branches of mercantile pursuits. Particularly is this so in the cases of failures in the jewelry trade. Whether or not the growing supremacy of the automobile as a means to social preferment and as a fashionable medium of diversion, has anything to do with the gradual depression in the jewelry trade matters not; sufficient is it that this cause is ascribed as the reason for many failures. The most recent example is that of a big Chicago jewelry corporation that failed recently, with liabilities amounting to about $100,000.

Albert W. Adcock, one of the officers of the company, in reciting the cause of the failure attributed it mainly to the popularity of the automobile. He said that society people of reputed wealth are not only failing to buy expensive jewelry as they did before the automoble came into such vogue.

"I attribute our failure mainly to the great craze that has recently taken possession of society people," said Adcock. "The purchase and maintenance of a first class automobile involves no little expense and I know a big lot of people whose names would be recognized as standing high on the social roll of Chicago who have made, and are making, all sorts of sacrifices, in order that they may keep a first class garage, a good chauffeur and may give notable automobiling parties.

"This being the case, they are not buying the same class of jewels and silver that they formerly did. They find that the expenses of the automobile establishment are such that they are compelled to give presents which, while they look about as good, are of lighter weight and less expensive quality than those they have heretofore given.

"When tires cost $60 to $90 apiece, people are apt to get along with lightweight silver. It looks very well and at a dinner no one is going to try how easily it will bend, nor examine it for the maker's name."

Jury Determines Value of Human Legs.

Although it might puzzle some juries it did not take a Norristown (Pa.) jury many minutes to decide how much it is worth to cause the breakage of two legs—one natural and one artificial, when it ordered John R. Wood, an iron manufacturer of Conshohocken, to pay $300 damages to John Rigler, also of that city, as the result of a suit brought by Rigler to recover for being thrown off a horse. Wood was held responsible for not stopping his automobile on the road in Plymouth township when the horse and its rider approached.

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The Week's Patents.

877,970. Pneumatic Tire. Otto Uhlmann, Taunton, Mass. Filed Feb. 16, 1907. Serial No. 357,602.

1. A vehicle wheel comprising a concaved felly, a pneumatic inner tube resting in said felly, a convexed tube cover fitting over the outer portion of the inner tube, a removable annular plate at each side the felly extending partially over the tube cover, an outer casing extending over the tube cover, and upper portion of said annular plates and provided with a heel piece at each lower edge, a removable annular plate at each side the felly outside said annular plate and provided with a hook shaped flange at its upper edge to grasp said heel piece, and means for maintaining the parts in assembled position.

878,005. Automobile Driving Gear. John E. Johnson, Leaf Mountain township, Ottertail county, Minn. Filed Feb. 16, 1907. Serial No. 357,657.

1. In an automobile, the combination with a supporting frame, of a front and rear axle, each divided in the middle, supporting wheels fixed on the outer ends of the axle section and bevel gears at the inner ends thereof, hubs journaled upon the abutting ends of the axle sections and provided with radial arms, compensating gears journaled at the ends of said arms and meshing with the bevel gears, a ring shaped sprocket wheel trunnioned on the ends of the journals of the compensating gears, and an endless chain belt engaging said sprocket wheels and thereby turn the rear and front shaft simultaneously, said front sprocket wheel having a ring held to it by two diametrically opposite trunnions, and the ring having at ninety degrees from said trunnions internal trunnions at the ends of the journals of the compensating gears, means for imparting rotary motion to said sprocket wheels, means for guiding the front sprocket wheel, and means for steering the front wheels by swinging the entire front axle in a horizontal plane.

878,015. Tubular Metallic Spring Tire. James K. Parker, Longbeach, Cal. Filed Dec. 12, 1906. Serial No. 647,554.

1. A vehicle wheel tire comprising a rim body, a sectional tubular elastic metal tire secured thereon, and springs within the sections and bearing outwardly thereon, said springs extending between the rim body and the metallic tire sections.

878,072. Transmission Gear for Automobiles. John W. Lambert, Anderson, Ind., assignor to The Buckeye Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Jan. 26, 1907. Serial No. 354,178.

1. A driving mechanism comprising a driving friction disc, a driven friction disc, a shaft carrying the driven friction disc, means for mounting said shaft to permit it to have a backward and forward movement, a beveled gear carried by said shaft, a longitudinal shaft carried by said longitudinal shaft meshing with the gear on the shaft of the driven disc, a rear axle, gears connecting the rear end of the longitudinal shaft with the rear axle, and means where-

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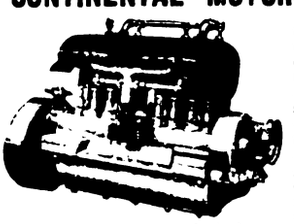
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by the shaft of the driven friction disc may be moved backward and forward without moving the gear carried by said shaft away from the gear carried by the longitudinal shaft.

878,073. Lubricant Distributor for Engines. Vincenzo Lancia, Turin, Italy, assignor to Lancia & Co., Turin, Italy. Filed May 13, 1907. Serial No. 373,486.

1. An engine lubricant distributor comprising a cylindrical casing closed at its ends a rotatable cylinder provided with two chambers communicating respectively with the ends of the casing, suction and discharge branches on the casing communicating with corresponding openings in the said chambers, a third chamber in said cylinder communicating at its ends with the two chambers, a displacer piston in said third chamber and means within the casing for reciprocating the piston in the cylinder, substantially as described.

878,074. Motor Vehicle. Josef Latzel, London, England. Filed June 10, 1907. Serial No. 378,242.

1. In combination, a driven gear member, an undivided stationary supporting axle member road wheels supported thereon and a continuous undivided rotating axle member connected to the driven gear member and to the road wheels, substantially as set forth.

878,075. Pneumatic Tire. Henry D. B. Lefferts and Eliphalet De Camp, Orange, N. J. Filed Jan. 15, 1907. Serial No. 352,440.

1. A pneumatic tire comprising an outer casing, a normally inflated main inner tube having a valve stem, and a normally deflated divided supplemental reserve tube arranged without the main inner tube and having terminal soft cap portions disposed in opposite relation to the valve stem, said soft cap portions being adapted to be inflated about said valve stem for the main inner tube.

878,077. Cushioning Device for Automatic Dilution Valves in Carburetters. Adele A. Longuemare, Paris, France. Filed Jan. 10, 1907. Serial No. 352,359.

1. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, and an operative connection between said piston and said member.

878,081. Vehicle Spring. Charles A. Meredith, St. Louis, Mo. Filed Sept. 3, 1907. Serial No. 391,245.

1. A spring of the class described comprising an upper section; a lower section; supports connected with the lower section; a sleeve mounted upon the axle of the vehicle and pivotally connected to the supports; an auxiliary spring carried by the supports to provide a more even and equal movement to the vehicle springs, substantially as specified.

878,156. Automobile Running Gear. Charles T. Pratt, Frankfort, N. Y. Filed April 10, 1907. Serial No. 367,308.

1. The combination in an automobile running gear of the frame and axle and pair of steerable ground wheels carrying one end of the frame, and pair of independent levers intermediately pivoted to the frame, an axle and pair of ground wheels carrying the rear ends of said levers and an axle and steerable pair of ground wheels carrying the forward ends of said levers and connected therewith by a suspending shackle all arranged to carry the other end of a frame, substantially as set forth.

878,176. Spark Timer. Darwin Almy, Providence, R. I. Filed May 16, 1906. Serial No. 317,247.

1. In a spark timer, the combination with a shaft, of a cam in the form of a collar having the roll rotatably secured in a recess in the collar by a screw pin in a position for the roll to extend beyond the periphery of the collar and adjustably secured to the shaft by a set bolt, a screw threaded trunnion supporting the shaft, a metal frame having the internally screw thread hub, the flat face, a plurality of lugs formed integral with the frame on the face, an insulating block secured to each lug and interfitting therewith, a binding post secured to the frame, a plurality of switches each switch consisting of a flat spring having a contact point adjacent its free end and rigidly secured at its opposite end to a lug in a position for the roll on the cam to engage the spring, a flat spring rigidly secured at one end to the adjoining insulating block by a screw and the nuts, and a screw post having the contact point adjustably secured to the free end of the spring by a split block and a nut in a position for the contact point to engage with the contact point, and a plurality of stops consisting of a screw covered with an insulating material and secured to the frame on the face in a position for the free end of the spring to engage with the stop and hold the contact points in their open position, whereby a direct electrical connection is made with the springs and a reciprocating sliding contact is given to the contact points on the springs, as described.

878,297. Carburetter. Leon M. J. C. Levavasseur, Puteaux, France. Filed May 16, 1907. Serial No. 373,922.

In a carburetter, the combination, with the admission chamber for the air having a lateral branch, and a valve in the lower part of said chamber which is opened by the suction of the engine, of a hydrocarbon container mounted on said chamber at its upper part and having a capillary passage directly above and in alignment with said valve, and means for supplying the hydrocarbon to said container.

878,364. Explosion Engine. Charles L. Edwards, Vernon, N. Y. Filed March 8, 1907. Serial No. 361,214.

1. In an explosion engine, the combination with a cylinder provided with a water jacket, and having in the end thereof an opening in which are formed an inner conical and an outer cylindrical valve seat, and having an inlet port and an exhaust port communicating with the opening, of an exhaust valve normally resting on the conical seat and closing the opening, said valve having a stem extending out of the cylinder, said cylinder being provided with a valve stem guide provided on its inner end with a petticoat, an inlet valve having a plurality of openings therethrough, normally closed by the petticoat, said valve moving in the cylindrical seat, and having a stem encircling the exhaust valve stem, said valve having a peripheral flange adapted to close the exhaust port, when moved away from the petticoat, concentric springs resting at their inner ends against the cylinder, and encircling the valve stems, the outer spring being of greater strength than the inner spring, a collar on each of the stems for engaging the outer ends of said springs, the collar on the exhaust valve stem being of greater diameter and engaging the stronger spring, said collars being spaced apart whereby the continued movement of the exhaust valve stem after the opening of the exhaust port will move the inlet valve to close the exhaust port and to open the inlet port, a drive shaft, a piston in the cylinder and connected therewith, and a connection between the drive shaft and the valve stem for operating the same at regular intervals.

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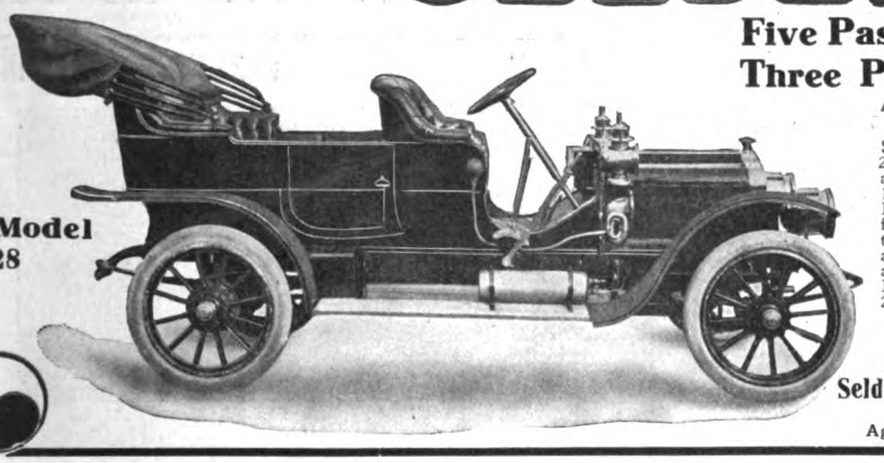
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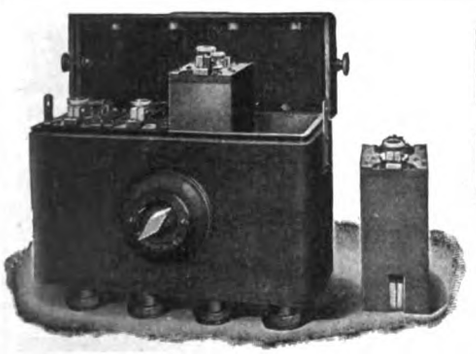
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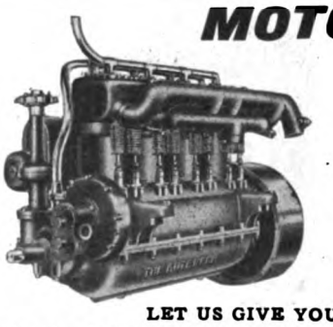


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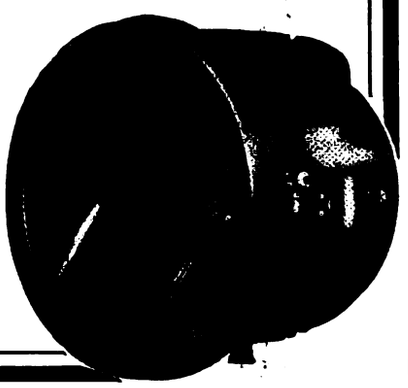
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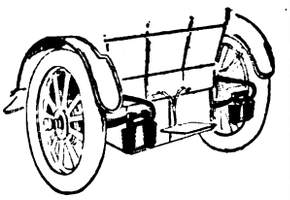


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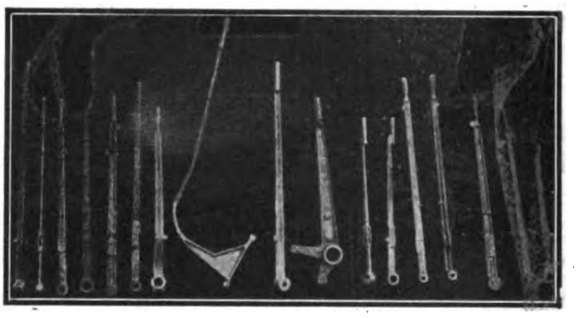
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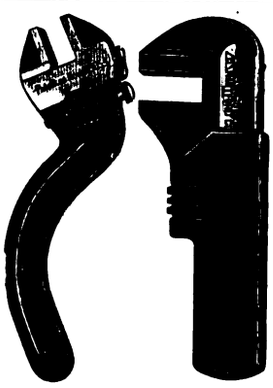


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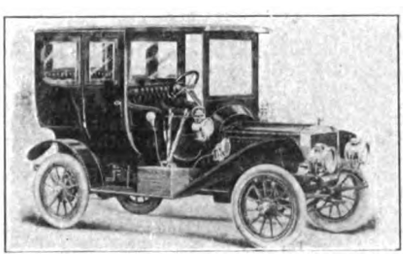




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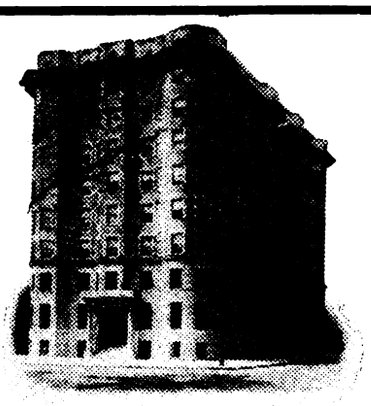
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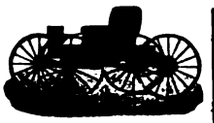
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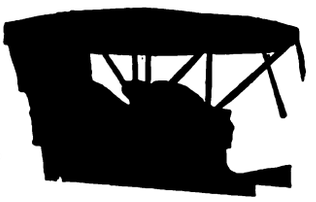
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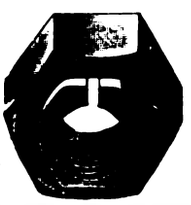
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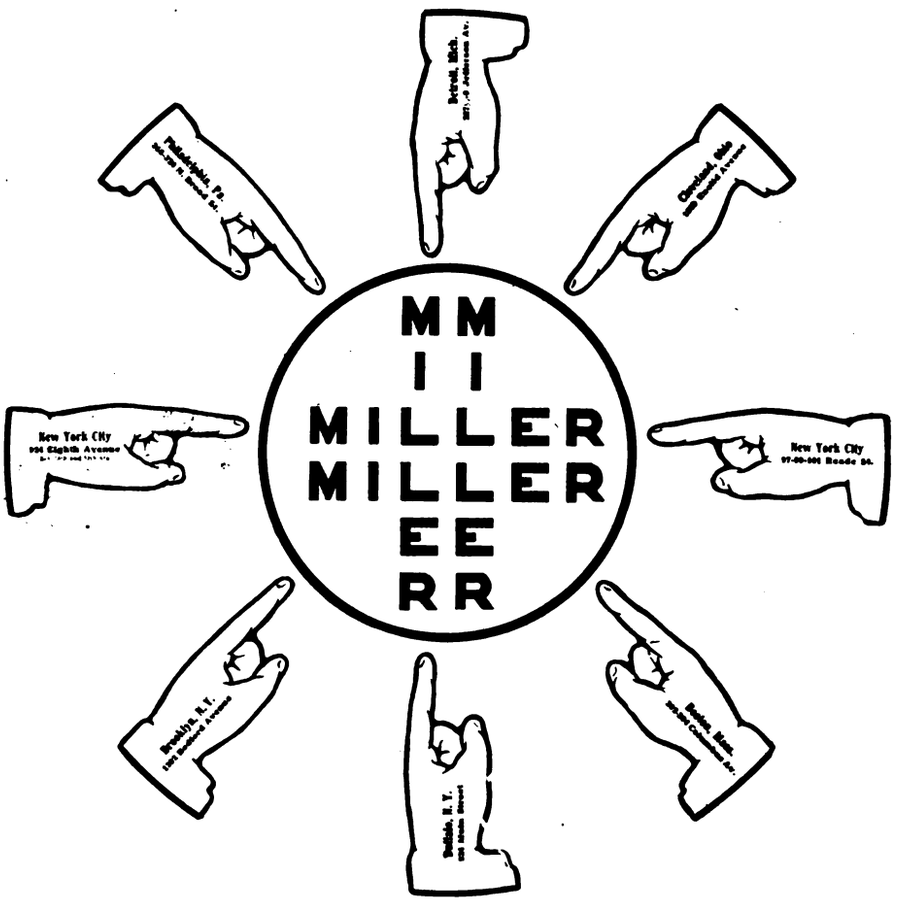
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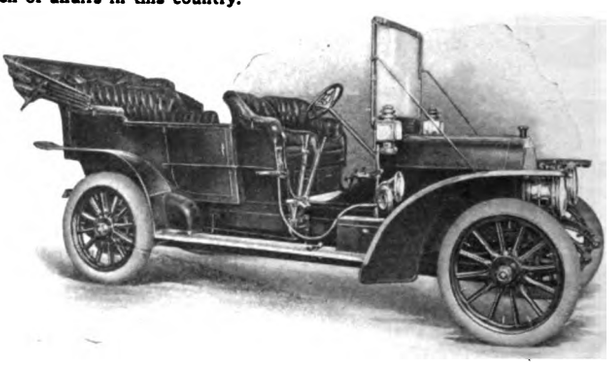
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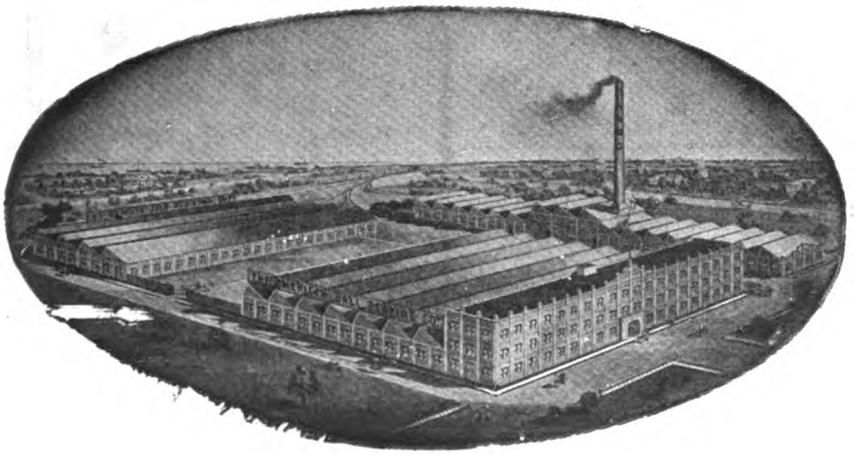


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(NEW YORK, APRIL 9)

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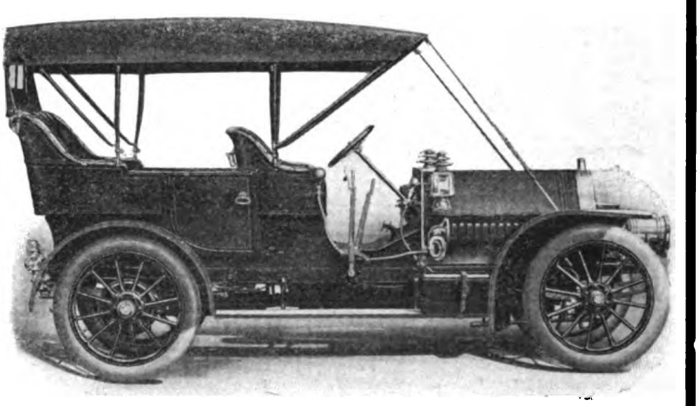
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THE "NON-SKIDDING" CAR



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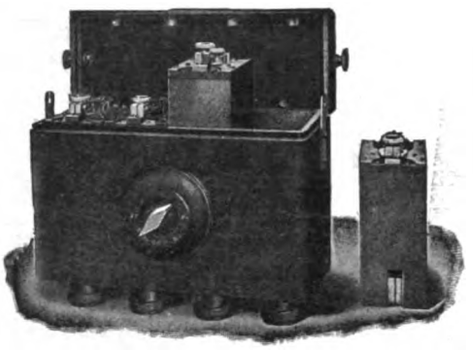
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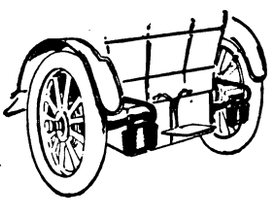


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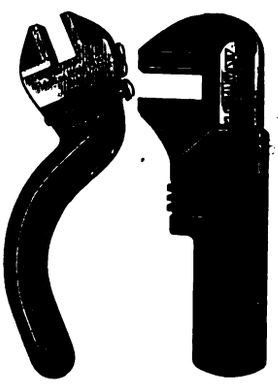
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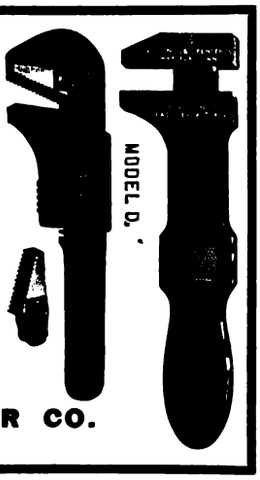
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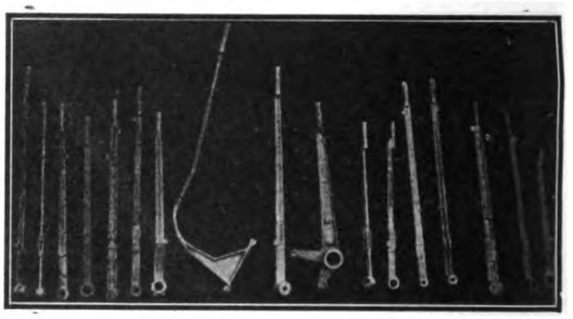


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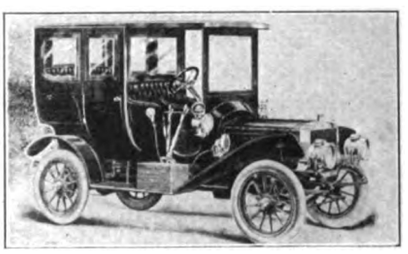
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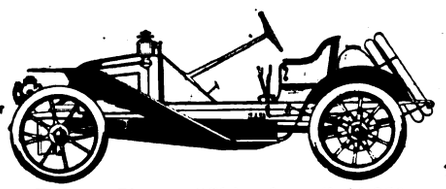
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1909 Model Auto Parts

Axles (3 sizes), Clutches, Reaches, Buffers, Propeller Shafts, Hand Levers, etc.

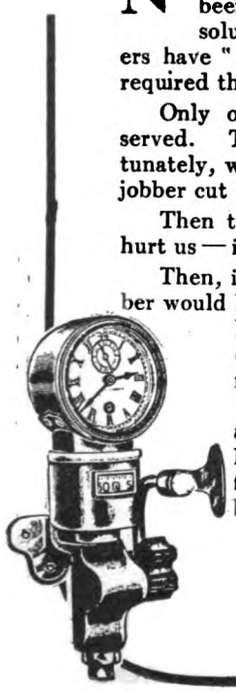
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NEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

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So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

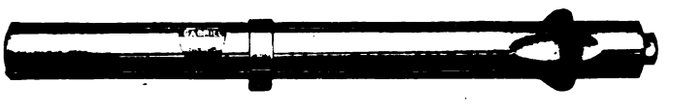
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Relieve your engine of the back pressure from the muffler with our new Cut-Out Valve.

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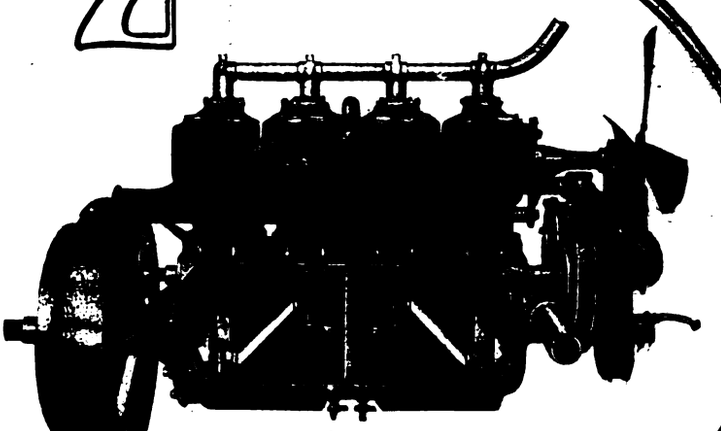
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A Detail of Convenience

Accessibility to every working part from above, is a notable feature in the construction of the



Model 34 motor, with side plate removed.

Rambler

For example, the motor, shaft and bearings are usually reached by removing the lower half of the crank case. This necessitates the removal of the boot or mud apron under the motor, a tedious and unpleasant job.

The Rambler crank case is not built that way. The entire side is removable, leaving an opening 8x23 inches that affords ample access to the entire crank shaft and cam mechanism without removal of or interference with any other part of the mechanism.

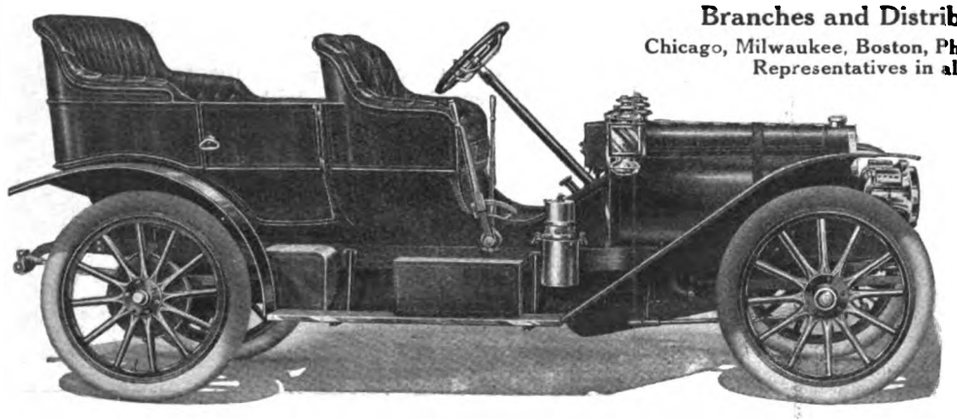
Transmission gears, differential and all other parts are equally accessible.

This is one of the little things that in the aggregate make the Rambler the leader of American cars. Our catalog tells the rest. Write for it or see our nearest representative for demonstration.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.

Branches and Distributing Agencies:
Chicago, Milwaukee, Boston, Philadelphia, San Francisco.
Representatives in all leading cities.



Model 34,
32 H-P,
Selective Transmission,
Shaft Drive
$2,250.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, April 16, 1908. No. 3

EFFECTS OF NEW YORK CARNIVAL

Beneficial in a General Way Though Unattended by Direct Results—Automobile Interests Stimulated.

Whatever its effect in respect to actual sales, there can be no doubt that New York's automobile carnival, which closed on Friday night with a smoker tendered by that superb local organization, the Automobile Club of America, accomplished wonders in the way of stimulating the spirits and energies of the men engaged in the business. A distinctly better tone pervades the entire local trade.

Practically all of the dealers and branch managers agree that the carnival had resulted in much desirable publicity and automobile interest, and was, generally speaking, a good thing, but a canvass of more than a dozen of those handling well known cars, after a lapse of several days had permitted any effervesence to subside, failed to disclose more than one who was willing to say that the festival actually had assisted in the promotion of sales.

Manager Bennett, of the White branch, stated that the victory of the White car in the hill climbing contest, which was one of the features of the carnival, had led to a number of sales, but he could trace none to the parade or the other events.

"All such affairs are of some value," he said, "but if any one can trace sales directly to their influence, I'm willing to admit that he has a better imagination than I possess."

Connecticut Claims Basic Coil Patent.

The Connecticut Telephone & Electric Co., of Meriden, Conn., have purchased of E. Q. Williams, Syracuse, N. Y., patent No. 884,116, issued on the 7th inst., and which they claim is the basic patent on the removable unit multiple coil. Williams's application was filed Dec. 28, 1904, but since that time it has been involved in an interference brought by Richard Varley, which, according to the Connecticut company, resulted in the final award of priority of invention to Williams. As a result of the purchase, the Connecticut coils hereafter will be made under the Williams patent, Williams himself retaining the right to market his own coils under arrangement with the Connecticut people, who intimate that suits several for infringement are in prospect, that type of coil being in general use.

New Company Buys Shoemaker Plant.

The much-troubled Shoemaker Automobile Co., of Elkhart, Ind., founded by the incubator manufacturer of that name, finally has ceased to exist. The trustee has sold the assets to a new corporation, the St. Joe Motor Car Co., which was formed for the purpose and which will continue the manufacture of automobiles in Elkhart. The officers are: Charles S. Conover, president; Oval G. Sellers, vice-president; Michael J. Feckler, secretary and treasurer. Scott Van Etten will be the superintendent. These men, with Charles A. Cooper, E. L. Shires and Charles LeTempt, constitute the incorporators. All of them previously were connected with the Shoemaker establishment. The capital stock of the company is $50,000, which is said to have been fully paid in.

Splitdorf to Open Chicago Store.

Charles F. Splitdorf has completed arrangements for the opening of a Chicago branch at 319 Michigan avenue. It will be in charge of B. P. Houlihan, long identified with the Splitdorf establishment, and will, of course, carry a full stock of Splitdorf coils, plugs and other ignition specialties. The Brandenburg Bros. Co. also will establish a store at the same address.

McCord May Remove from Chicago.

McCord & Co., the well known Chicago manufacturers of lubricators and radiators, contemplate removal from the Windy City. Their representatives recently visited South Bend, Ind., where a number of factory sites were inspected.

G & J TIRE LOSES ON APPEAL

Judgment of Lower Court Affirmed—Decision Declares no Tires were Made in Accordance with Chief Patent.

Upholding the decision of Judge Buffington in the lower court and employing his language as its own, the United States Circuit Court of Appeals for the Third Circuit, has rendered judgment in favor of defendants in the case of the G & J Tire Co. vs. Pennsylvania Rubber Co., which involved the G & J patents on the clincher type of tire.

Judge Buffington's decision, which was rendered in September last, affected four patents, Nos. 454,115, 558,956, 466,565 and 523,314, none of which he ruled had been infringed. When the G & J company carried the case to the higher court, they based their appeal on patents Nos. 454,115 and 558,956. The appeal was heard by Judges Gray, Cross and Holland, the opinion sustaining the lower court being written by Judge Holland.

The gist of the decision is that the G & J Tire Co. never had made a tire in accordance with the provisions of the patents in question. The burden of the Pennsylvania Rubber Co.'s defense was, of course, that of non-infringement, although they admitted that their tire was similar to that described by the Golden patent, No. 493,160, which also was the property of the G & J company, but which had expired and become public property before they (the defendants) began the production of such tires.

Judge Holland's decision in full is as follows:

This case comes here on an appeal from a decree of the Circuit Court of the western district of Pennsylvania dismissing the bill. In the court below infringement was charged as to four patents. On this appeal two of the patents are dropped, and the two relied on were granted to Thomas B. Jeffery for inventions in vehicle tires. The infringement is charged as to claims 1, 2, 3, 4, 5 and 6 of letters patent No. 454,115, issued June 16th, 1891,

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on application filed March 26th, 1891, and claims 5 and 10 of letters patent No. 558,956, issued April 28th, 1896, on application filed April 1st, 1891. In the opinion of the Circuit Court, reported in 155 Fed. Rep. 982, it was held that infringement was not proven, for which reason the bill was dismissed.

Rubber tires have been used on vehicles for a number of years, particularly upon bicycles, and at first were solid and attached to the rim of the wheel by various devices. Improvements in the art followed rapidly, both as to the construction of the tire and the mode of adjustment, so that by the time they had advanced from bicycles to automobiles, the art had progressed from the solid to the cushion, and thence to the pneumatic form. Patents were issued for each of these improvements, both as to the construction of the tire and the mode of attachment.

First: The oldest and most obvious form was the solid tire consisting of mere hoops or bands of rubber, with some means of attachment, such as screws or bolts. Then was introduced the tube extending through the inside of the rubber tire so as to give it more elasticity, and was called a cushion tire. In still others, this tube was filled with compressed air to still further increase the elasticity, and these were called pneumatic tires. They were attached to the rim of the wheel by bolts, diverging flanges or ears, wire bindings, and sometimes by cement. But, however, attached, and whether the tire itself was solid or cushion or pneumatic, it invariably, in this stage of the art, was completely formed and self-sustaining both before attachment to and after detachment from the wheel; and in every case the means of attachment, whether bolts, ears, wires or cement, was a mere addition to complete the tire, performing no function in resisting any strain from within the tire. Up to this time they contained no sheath, but every advance was patented, both as to construction and mode of attachment. Next was developed the tire containing a sheath, which is not made up until attached to the wheel, and in which the wheel rim and sheath together form a girdle to restrain the tube from bursting.

The Dunlop was the progenitor of this class, and was patented in England March 8th, 1889, and in the United States No. 435,995 on September 9th, 1890, upon an application filed March 11th, 1890. It is referred to in the first patent in suit, to-wit, No. 454,115, descriptively as "a tire having a core composed of elastically-expansible tube, which is inflated by air or gas distended thereby to some extent, the air or gas being under such tension that but for a restraining or enclosing sheath such core would be liable to burst."

The claim in Dunlop's patent is as follows:

"In hollow air-inflated wheel tires for cycles and other vehicles, the combination, with an inner expansible tube and outer protective covering of strengthening folds or layers of cloth, canvas, or linen, and protective strips of caoutchouc interposed between the edges of the rim and strengthening fold or layer, substantially as and for the purpose herein set forth."

Besides this, there is one other patent of importance in considering the state of the art in connection with the questions at issue. This patent was issued in England to Golding on December 8th, 1890, and in the United States (No. 493,160) on March 7th, 1903, on an application which had been filed October 6th, 1891. It was for an improvement in rubber tires and rims for velocipedes and other light carriages. We find from the specifications that "The edges of the rim are bent round and brought a short distance toward each other and nearly parallel to the flat surface of the rim, thus forming an inner recess or groove along the rim on both sides, suitable for holding the projecting flanges of the tire." The tire contained a corresponding lateral flange, which was inserted into this recess and secured by the pressure of the compressed air when the tire was inflated.

Claim 1 is as follows:

"The combination with a metallic wheel rim having lateral recesses formed by reflexing the edges, of an inflatable tire having corresponding lateral flanges which are detachably inserted into such recesses, and are secured therein by the pressure of the contained compressed air when the tire is inflated substantially as hereinbefore set forth."

(Continued on page 92)

The Week's Corporations.

Chicago, Ill.—Michelin Tire Co., under Illinois laws, a New Jersey corporation, with $3,000,000 capital; to sell tires. Corporator—C. Harbridge, Chicago, Ill.

Boston, Mass.—Automobile Time Saver Repair Kit Co., under Massachusetts laws, with $5,000 capital. Corporators—James H. Rand, James H. Rand, Jr., Boston, Mass.

Buffalo, N. Y.—Griffin Double Tread Car Wheel Co., under New York laws, with $200,000 capital. Corporators—H. F. Griffin, W. A. Griffin, E. B. McKenna, Buffalo, N. Y.

New York City, N. Y.—Axle Cushion and Motor Co., The, under New York laws, with $250,000 capital. Corporators, J. B. Roberts, L. B. Leavitt, H. B. Shonk, New York City, N. Y.

Elkhart, Ind.—St. Joe Motor Car Co., under Indiana laws, with $5,000 capital. Corporators—C. S. Conover, M. S. Feckler, O. G. Sellers, E. L. Shires, Charles Le Tempt, C. A. Cooper, Scott Van Etten.

Hartford, Conn.—Nevels Mfg. Co., The, under Connecticut laws, with $100,000 capital, to manufacture automobiles, coin controlled machines, boilers, engines and elevators. Corporators—Anthony L. Nevels, Frank J. Knox, I. G. Cranton.

Elkhart, Ind.—Elkhart Motor Car Co., The, under Indiana laws, with $100,000 capital, to manufacture automobiles. Corporators—Dr. Edward C. Crow, Franklin O. Hudson, Charles L. Monger, Martin E. Crow, Willard W. Sterling, Elkhart, Ind.

Inwood, N. Y.—Chandler Co., The, under New York laws, with $30,000 capital; to manufacture chains and supplies for automobiles, motors, boats and launches. Corporators—W. A. Reinhart, H. Golden, Inwood, N. Y.; H. H. Chandler, New York City, N. Y.

In the Retail World.

Perkins & Corliss of Gloucester, Mass., have opened their garage at Manchester for the summer season.

F. W. White, a Chelsea dealer, was one of the victims of the great fire in that Massachusetts city on Sunday, 13th inst. His establishment at 44 Fourth street was destroyed.

Work has begun at Mitchell, S. D., on the construction of a building for the Mitchell Auto and Supply Co., which has just been formed and has secured agencies for several cars. The building will be two stories, 25x60 feet, with a basement of the same dimensions.

J. F. Crutchfield has been elected president and manager of the Charleston (S. C.) Motor Co., succeeding T. B. Jenkins, of Sumter, S. C., who takes the vice-presidency. E. B. Gunter, Jr., succeeds J. E. Richard as secretary and treasurer. The company has the Reo and Premier agencies and operates a repair shop at 161 Meeting street.

George A. Kuntz, at present dealing in bicycles, feed and coal, at 1205 Twenty-fifth street, Des Moines, Iowa, is preparing to enter the automobile trade as a dealer, repair man and garage proprietor. He has begun work on a one-story building fronting 100 feet on Cottage Grove avenue, and extending back 80 feet.

The Galesburg Automobile Co. is the name of a new concern which is refitting the old Western Tool Works garage on South Prairie street, Galesburg, Ill. A. A. Addis, of Victoria, and J. E. Whitten, of Duncan, are the moving spirits. The company will sell the Glide, Jackson, and Kiblinger cars. A garage and repair shop business also will be conducted.

Construction work is to begin within a few weeks on a brick building on Hudson street, Oklahoma City, Okla., to be occupied as an automobile depository. It will be the center of distribution in the southwest for the Winfield Auto Co., of Winfield, Kan., and will be managed by C. D. and G. J. Fritz. The building will be 50 feet wide, with a solid glass front, and will extend back 100 feet. The estimated cost is $5,000.

London Bus Interests Amalgamating.

At a meeting called for the purpose of effecting the amalgamation of the London General Omnibus Co., and the Vanguard Motorbus Co., London's two great public service companies, the chairman of the former corporation forcibly called attention to the causes which have led to a rapid succession of re-organizations and amalgamations during the tumultuous four years since the first motor omnibuses were put into regular service in the city.

"No sooner had they made their appearance," he said, "than those vultures of the commercial world—the company promoters—appeared on the scene and worked the new craze for all it was worth to them. They appealed to the public for money to float companies, and a wave of financial lunacy appeared to spread over the public at that time, and they shoveled hundreds and thousands of pounds into the shares of those companies." The efforts to re-establish the confidence which was shaken by the ill-organized ventures appear to be taking the form of a general consolidation of the more successful organizations, while the weaklings are being crowded out of existence.

San Diego Dealers Get Together.

The Automobile Dealers' Association of San Diego, Cal., has been formed with F. D. Naylor as president, L. Parker Thompson secretary, and H. N. Hanshue treasurer. It proposes to hold the first race meet on the Gay Speedway at Lakeside, Cal., in May.

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POPE RECEIVERS ADD TO BALANCE

Report of March Transactions Shows Big Increase—Volume of Sales for the Month Exceeds $200,000.

The report of Receivers Pope and Yule covering their transactions for the Pope Mfg. Co. during the month of March shows a big increase in the cash balance. The figures as filed in the Superior Court at Hartford are as follows:

Balance in banks and cash in office, Feb. 29, 1908		$12,605.87
Receipts from collections of accounts and notes receivable of Pope Mfg. Co.:		
Hartford accounts	$2,626.92	
Westfield accounts	4,633.75	
Hagerstown accounts	746.83	
	$8,007.50	
Receipts from sales by receivers	$166,756.58	
Receipts from deposits by customers on orders for automobiles	2,920.00	
Interest on accounts and notes receivable.	13.97	
Refund of travelers' advances	31.15	
Receipts from and for account of:—		
Receivers in Mass., (Westfield)	590.49	
Receivers in Maryland.	1,156.23	
Receivers in New Jersey	122.02	
Receivers in Toledo	16.55	
	$1,885.29	179,614.49
		$192,220.36

Cash disbursements for March, 1908.

Refund of deposits received on miscellaneous undelivered orders	$249.32
Receivers' expenses and payment for purchases:—	
Pay rolls factory and office	46,158.75
Miscellaneous and selling expenses	2,838.04
Materials and supplies	51,485.51
Premiums on insurance	603.82
Patent fees and expenses	50.00
Disbursements of attorneys for receivers	84.97
Payments in settlement of accounts with:—	
Receivers in Massachusetts	861.26
Receivers in Maryland	5,030.08
Receivers in New Jersey	206.20
Receivers in Illinois	59.80
Receivers in Toledo	131.81
Receivers in Indianapolis	6,669.55
	$114,429.11
Balance in American Nat. Bank	$76,640.82
Balance in First Nat. Bank	266.19
Cash in office	884.24
	$77,791.25

Accrued liabilities of receivers.

For materials, supplies and miscellaneous expenses	$70,998.92
For pay rolls factory and office	12,837.07
	$83,835.99
Balances due receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts	$1,674.78
Accounts receivable from sales of receivers January 31, 1908, per last report	$134,997.38
Sales by receivers for month of March, 1908	203,628.51
	$338,625.89
Less cash collections for month of March, 1908 $166,756.58	
Deposits credited to accounts receivable, cash discounts and miscellaneous contra accounts 9,369.24	
	176,125.82
	$162,500.07
Balance due from receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts for transfers of merchandise and supplies and advances for expenses	$7,723.38

E. V. Receivers Make Good Report.

In accordance with the requirements of the Connecticut law, the receivers of the Electric Vehicle Co. last week filed in the Superior Court, Hartford, an account of the business done by them during the month of March. The report is as follows:

Charges on account and cash sales, $37,457.21.

Purchases on account, $7,559.15; cash, $181.12.

Cash Statement.

Receipts.

Cash on hand March 1, 1908	$30,056.90
Cash collected on E. V. Co. acct.	1,138.37
Cash collected on Receivers acct.	41,514.16
Cash collected on misc. sales	1.57
	$72,711.00

Disbursements.

Pay roll	$10,997.49
Traveling expense	240.00
Purchase creditors	4,152.04
Receivers' salaries	1,800.00
Receivers' bond	400.00
Refund of Adv. payment	1,500.00
Freight and express	291.46
Telephone and telegraph	163.80
Salesmen's commissions	166.18
Petty cash	181.12
Operators' license	2.00
	$19,894.09
Cash receipts	$72,711.00
Cash disbursed	19,894.09
Balance on hand April 1	$52,816.91

Three Apples Form New Company.

H. F. Apple, O. D. Apple and V. G. Apple have withdrawn from the Dayton Electrical Mfg. Co., Dayton, Ohio, and have gone in business in that city as the Apple Electric Co. V. G. Apple, however, still retains his interest in the Dayton Electrical Mfg. Co., and will continue to serve as its vice-president. The Apples will make storage batteries and other appliances.

Court Orders Sale of Berkshire Assets.

The court having ordered the sale of the assets of the Berkshire Motor Car Co., Pittsfield, Mass., the receiver has set April 25th as the date for the auction. Everything will be disposed of save the notes and accounts receivable.

TO RETIRE FROM SHOW BUSINESS

A. C. A. Regards Its Condescending Co-operation as no Longer Necessary—Hoyt Explains Its Attitude.

Reports that the Automobile Club of America would have no more to do with shows, which were current immediately after the Grand Central Palace show in New York last October, were given confirmation on Tuesday evening last when Colgate Hoyt, the retiring president of the organization, rendered his report. After remarking that despite the financial upheaval which was precipitated during the week of the show, a profit of $40,000 had been earned, Mr. Hoyt advised that the club cease to participate in such affairs. The exact language of his recommendation is so condescending in tone as to be worthy of a Shattuck and for the first time will cause the men in the industry to realize how poor and weak they must have been without Mr. Shattuck's club.

"I would draw the attention of members to the fact that the Club held the first show in this country in 1900, at a time when the industry was young and needed its support and influence; that it has always stood for an open show and fair play to any manufacturer who had a legitimate product to exhibit," said Mr. Hoyt. "I am of the opinion, however, that the manufacturers are now, in their several associations, sufficiently strong to conduct their own shows without our support or assistance, and that the Club should now retire from the field and direct its energies and activities along the many other avenues of endeavor which will make for the general good of all motorists."

When the Motor World reported that the A. C. A. contemplated action of the sort, diplomatic evasion was made; and within the past month the American Motor Car Manufacturers Association, which for three years had joined with the A. C. A. in the promotion of the "independent" show in New York, let it be known that a renewal of such relations was not impossible. The manufacturers' association now has in contemplation a traveling show to visit the leading cities.

Prest-o-Lite Plant Sent to Suburbs.

As a result of the two disastrous fires in its plant, the Prest-o-Lite Co. have had a hard time in inducing the city council of Indianapolis to grant them permission to do business within the city limits. After a long fight, however, and by a vote of 13 to 7, an ordinance was passed last week, permitting the company to maintain a storage plant on East South street, but requiring that the producing and compressing plant be removed far out in the country district.

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The Mitchell

The car you can afford to buy—and keep



The Mitchell appeals *to you*, Mr. Business Man, because it gives you just as much *pleasure*—just as much and as *good service*, is just as *stylish* and neatly *finished* as any car, and doesn't cost you a small fortune to *buy*—or *keep*.

The Mitchell at $2000 is the standard automobile value.

Prove it—Mr. Business Man.

Get *demonstrations* of the extravagantly high-priced cars—and then try the *Mitchell* over the *same* route.

The Mitchell agent will be glad to take you out if you're interested for 50 or 100 miles any time you say. Call him up (it places you under no obligation)—*Challenge* him—

Just say, "Show Me."

He'll come around with a car and show you a "silent argument" that will get your order or he will retire without a word.

Our catalog No. 18 is fully descriptive of the Mitchell 1908 Touring Car $2000—Limousine $2800—Roadster $1250 and Runabout $1000. Write for it—we'll also send letters from users, proving the Mitchell to be the most economical car to *operate*.

Mitchell Motor Car Co. 281 Mitchell Street, Racine, Wis.

Member American Motor Car Mfrs. Ass'n.

Just say "Show Me"

This car—shown here—35 h. p., 4 cyl., speed 50 miles, finished in Mitchell blue—price $2000—is excellent throughout—the car you ought to have at the price you ought to pay.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



WHITE WINS FORT GEORGE HILL-CLIMB

A 30 horse-power White Steamer scored the fastest time in the great hill-climb in New York on April 9th, making the ascent of Fort George Hill from a standing start in 32⅕ seconds, as compared with 36 seconds, scored by the fastest of the gasoline cars. All makes, domestic and foreign, claiming special hill-climbing ability, were represented in this contest.

The White has won so many important hill-climbs that its superiority in this style of competition is no longer questioned. The reasons for this superiority may be stated as follows:

1. The White engine, when called upon to do so, can probably develop more power than any other type.
2. It is certain that a larger percentage of the power of the engine is delivered at the rear wheels in the White than in any other machine. This was proven with mathematical exactness in the great English contest at South Harting, held for the purpose of determining this point.
3. The question of proper gearing for different gradients is not a vital one in the case of the White, as the car adapts itself perfectly to varying conditions. In other words, the unique flexibility of the White is of considerable advantage in hill-climbing contests, just as it is in touring or in city use.

Catalog, Bulletins and White Route Books sent on request

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CLEVELAND, OHIO

New York City, Broadway at 62d St. Boston, 320 Newbury St.
San Francisco, 1460 Market St. Chicago, 240 Michigan Ave.
Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave.
Pittsburg, 138-148 Beatty Street.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 16, 1908

The Matter of Special Bodies.

It is not so vary long since it was confidently predicted that the immediate future of the retail market would consist of a demand for chassis on the one hand and for bodies on the other, the two requirements being sufficiently distinct to warrant a direct ascent into the field of specalization in both cases. That the verification of this forecast is still a long way off, if indeed, it ever will come about, requires no argument by way of proof. The only practical change which has developed is in respect to the number and variety of models produced by the makers which in many instances reveal no points of difference extending below the chassis line, and in others, only such as are comparatively trivial in their nature.

A rather surprising trend which is observable this year more than ever before, however, which is quite apart from any prediction ever made, is revealed in the attitude of a considerable number of buyers who pay the closest attention to the design and construction of the chassis, but manifest an astonishing amount of indifference as to the body. So long as the car is what they want, mechanically speaking, the body requirements may be briefly summarized as comprising a place to sit down and something to hold on to. It may be that more substantial bodies are generally contemplated as a later investment, it may be that the growing use of the closed car for autumn and winter running has tended to reduce the outlay which is considered expedient for purely fair weather bodies, and so for the first investment. At all events, neither the chassis alone, nor the complete car equipped with an expensive body are in any way the rule of the day.

Certainly the business in custom-made bodies has not expanded as had been expected. This is perhaps more than half accounted for by the fact that the average owner finds himself pretty much at sea when it comes to drawing the specifications for a body which exactly fits his ideal. Usually it is a great deal easier to follow in the footsteps of his neighbor who has purchased from stock, than to assert his independence by following new and untried lines.

About Mr. Hower's "Blind Run."

Thanks to his versatile press bureau, the reasons why Chairman Hower, of the A. A. A. Touring Board, personally is the beginning and the end, and all that lies between, of the Glidden touring contest, now are perfectly and deliciously clear. The chief reason is that "when the contest is under way, it is similar to the forced march of an army" and therefore requires a "commander."

Last year when a committee was in charge and when contentions arose, contestants appealed to various members thereof and as a result Mr. Hower found cause for embarrassment. Therefore, according to his press bureau, "the situation has been sanely solved" by making the chairmanship "autocratic" and fully responsible, which even his defender admits is "ethically a high handed usurpation of committee powers."

As a matter of fact, there is nothing ethical about the usurpation of power; it is very real and intensely practical. The like of it probably was never known before in the history of sport. Mr. Hower's usurpation begins long before the "army" begins its "forced march." For he alone has power to reject entries and observers; and not merely during the "march," but afterwards and up to even the final award, he alone has the power to alter, add to, suspend or repeal the rules or any part of them. In other words, and to all intents and purposes, the only standing rule that must be followed and obeyed is Hower himself. It were better, therefore, that photographs of the gentleman himself be presented to the contestants instead of the long assortment of regulations that has been put into type. The latter mean nothing. The photograph stands for the only genuine, blown-in-the-bottle rule that must be observed.

The Motor World is not insensible of the imperative necessity for undivided responsibility on occasions of the sort. Mr. Hower, however, appears to have used a magnifying glass in viewing his trials and tribulations of last year, for despite appearances, the Glidden touring contest differs little from any other contest. For every contest of whatever sort there is a referee. After the event has been organized and is ready for the road or track or field, he assumes command. The authority and responsibility belong to him alone. His duty is to enforce the rules without fear or favor. He cannot go behind them. He cannot become a law unto himself. He cannot require contestants to do that which is not required by the rules.

When that sort of thing obtains, the contest ceases to be a contest. It becomes a "blind run"; and, without intending offense, it is fair to say that "Hower's blind run" is a more fitting designation than any other for the forthcoming Glidden touring contest, or "forced march," or whatever else it may be styled. It is all Hower. He can go behind the so-called rules whenever the whim seizes him. He is not merely superior to them; he is the Only Rule. And not even his active and efficient press bureau has attempted to answer the question: What will happen to the contest, if anything happens to Hower?

It may be true, as stated by one of its officials, that the Automobile Club of America is regarded abroad as the "national club in this country" and that it has "binding treaties with every foreign national automobile club of importance;" if it is true, the joke is on the foreigners. Everyone in America, excepting probably a Mr. Shattuck, who looks like a foreigner

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and tries to act like one, and a few other persons, is well aware that the A. C. A.'s chief claim as a national organization rests in its name. It is undoubted that the club contains a number of wealthy and eminently respectable New Yorkers, one of whom manages the garage where Mr. Shattuck keeps his cars, but lately it has become better known as a place where spark plugs, axle grease and accident insurance may be purchased at cut rates.

If the various trade organizations do not hold a joint meeting and pass resolutions of thanks to the Automobile Club of America for the manner in which it has acted as the wetnurse for the industry during all these years, the tradesmen will be guilty of gross ingratitude! Of course, it will be news to many of them that the A. C. A. has been their wet nurse, but all who note the gracious condescention with which the club makes the statement in practically announcing its withdrawal from the show business cannot fail to be convinced. It is awfully nice of the club to tell the industry that it is now such a big boy that it can cast loose from mamma's apron strings.

If Chairman Hower's press bureau is anxious to indulge in further explanations, it might point out the necessity for increasing the entry fee for the Glidden contest from $100 to $200. As last year's affair netted a profit of $1,100, the only apparent reason for the increase seems to be Mr. Hower's written prophecy that his committee would have a surplus of $5,000 by the end of the present season. The "forced march" already is sufficiently expensive without "piling on the agony" for the mere sake of money-making.

In case it is decided to repeat the New York automobile carnival parade in other years, it will be wise for the promoters to undeceive themselves. It will require no very extended inquiry to discover that there were very few of the tens of thousands who lined the route who had eyes for other than the relics and the decorated cars.

Those New Jerseymen who purposed fighting Frelinghuysenism to the b-i-t-t-e-r end should now get together again and sing the doxology. The carpetbag senator has had enacted a law which makes it a misdemeanor to throw glass in the highways.

STATISTICS OF THE DENVER SHOW

Opening Attended by 3,500 Visitors—Half a Hundred Makes of Cars Staged—Big Display of Accessories.

Coloradans are long on statistics. They can almost tell one just how many and the the number of species of trees to be found in the Uncompahgre national reserve or how many "lungers" locate in Denver each season. Therefore, to gain a clear comprehension of the magnitude of Denver's annual show which held forth in the Mammoth skating rink on April 6, 7, and 8, it is only necessary to quote a few figures. Numerals are impressive, anyway.

The total value of exhibits was $335,955.85; the value of cars on the main floor was $260,955. Having learned this it is quite a simple process to determine the value of the accessories staged in the gallery. To find the answer subtract the smaller sum from the larger. The number of exhibitors was 55, and of this number 25 showed automobiles. To ascertain how many accessories exhibitors the same process may be repeated. The total number of cars shown was 104, comprising 51 makes. Of the total number 79 were gasolene, 22 electric and 3 steam cars. The passenger seating capacity of the cars shown was 394, while the total horsepower was 2,382, almost enough to pull Pike's Peak from its solid foundation if it could be applied in just the right way. The ground floor space amounted to 17,000 square feet, and there were 3,000 of this kind of feet in the gallery. On the opening night 3,501 persons saw the show. The decorations consisted of white pillars, dogwood blossoms and snowballs. Having detailed all these facts there remains only the list of exhibitors showing cars to append, which is as follows:

Charles Bilz, Franklin; George Hering, Stanley; Havens Auto Co., Lambert, Dorris, Atlas; Mathewson Automobile Co., Thomas-Buffalo, Thomas-Detroit, Oldsmobile and Columbus; Felker Auto Co., Stevens-Duryea and Pope-Waverly; Chicago Auto Co., Locomobile; A. T. Wilson, Kisselkar, Earl and Wayne; Studebaker Automobile Co., Studebaker; Wood & Barnett, Stoddard-Dayton; Tom Botterill, Pierce, Pope-Hartford; E. R. Cumbe, Mitchell and Rambler; Tobin Motor Car Co., Peerless and Fritchie; MacFarland-Powell Auto Co., Packard and Buick; Reo Auto Co., Reo and Premier; George E. Hannan, Jackson; Denver Motor Car Co., Great Smith and Carter; Colorado Auto Co., Cadillac; Newbold & Co., Speedwell; Colburn Auto Co., Colburn, White and Rauch & Lang; Fernald Auto Co., Inc., Maxwell; Donaldson Motor Car Co., Gaeth, Cameron and Regal; Cross & Van Hoogenhuyze, Jewell; H. A. Trinkle, Brush; Wood, Erickson & Trimble, Mason and A. B. C.; Covington Motor Car Co., Aerocar.

COMING EVENTS

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

April 29, 30 and May 1, Detroit, Mich.—Detroit Automobile Dealers' Association's three days' reliability run to Saginaw, Kalamazoo and return.

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

July 9, Buffalo, N. Y.—Start of Amercan Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

Chalmers Lets Fall Opinions.

"Heretofore automobiles have been bought; now they must be sold," is the manner in which Hugh Chalmers, president of the E. R. Thomas Detroit Co. summarizes the existing situation.

Mr. Chalmers was for years the selling expert of the National Cash Register Co., a concern widely known for its wonderfully efficient selling organization, which Mr. Chalmers himself built up. His specialty is selling and it is natural that he should realize most keenly the demands of the automobile business from a selling standpoint.

"The country must be so districted and the selling force so organized that dealers or agents can call upon the prospective buyers quickly and frequently." he says. "These dealers must be taught the superior features of the cars they sell. And their agencies or branches must be organized to give efficient service to users at reasonable prices.

"The automobile business has got to a point where it is going to be a case of the survival of the fittest. And the fittest will be those manufacturers who not only make the best cars but also build up the best selling organization."

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NEW JERSEY GOES THE LIMIT

Frelinghuysen's Ideas are Enacted—Increased Fees, No Non-Resident Privileges, and Same Speed Limit.

That more or less distinguished New York Jerseyman, Joseph S. Frelinghuysen, who serves as a Senator for the State of New Jersey, although he actually resides in New York City, has accomplished his "squeeze." When the thumbscrews are applied, it is estimated that about 250,000 fine, large dollars will fall from the pockets of automobilists into New Jersey's treasury. Frelinghuysen's amended bill has been passed by both the Senate and the House and will become operative immediately it is signed by the Governor.

According to several reports, Assemblyman Colgate had succeeded in having the speed limit increased from 20 to 30 miles an hour, but this is not the case; in fact, some legerdemain appears to have been practiced in the final shuffle as the so-called tourists' or non-residents' registration fee —50 cents for a period of six days—was dropped entirely and does not appear among the amendments that were enacted. As a result, residents and non-residents alike must pay the following fees for using what are erroneously termed the public roads:

	Registration.	License.
Under 10 h.p.....	$3	$2
From 10 h.p. to 29 h.p.....	5	2
Over 30 h.p.....	10	4

The higher rating will govern the fee in each instance.

The blanket registration fee of $20 for dealers and manufacturers, has been superseded by a fee of $5 per car.

The fee for motorcycles has been doubled —from $1 to $2—and henceforth they must carry a tag.

The commissioner of motor vehicles will hereafter supply the number plates which must be carried front and rear.

All registrations and licenses will expire on December 31st of each year, instead of one year from the date of issue, as at present.

For the benefit of non-resident cab companies, the new law provides that in return for a fee of $100 they may operate as many as 15 automobiles, if they do not carry passengers for a greater distance than 15 miles into New Jersey.

The Commissioner of Motor Vehicles is authorized to employ not exceeding 10 inspectors and to provide them with motorcycles. They practically will be mounted constables. They will be paid $3 per day. In addition, the commissioner may designate twenty citizens as "special inspectors." They will serve without pay.

The new measure will prohibit any one under 16 years of age from driving an automobile. Drivers' licenses will be of two classes. The first class certificate—fee $2—will permit the men to operate only cars of less than 30 horsepower; the second class —fee $4—will permit the operation of cars of any power.

All other requirements of the existing law are retained.

When the "Human Bridge" Collapsed.

Motor cars appear to possess an irresistable attraction for the restless souls who invent circus "stunts," and though the result of the performances which they evolve are not always as much in doubt as they appear to the audience, such is not always the case. In the course of a circus performance in Brussels, recently, a heavy touring car was being driven over a "bridge" supported by two athletes who upheld it by lying on their backs with their feet in the air. For two successive evenings the feat was performed successfully, but on the third, the driver of the car felt the bridge begin to give just as the car was well upon it. It being too late to think of backing off, he dropped into high gear and attempted to "rush it" before the crash came. In this, he was successful to the extent of charging into a box office, which happened to be empty at the time and smashing both it and the front of the car. The "bridge" collapsed, however, before the weight of the machine had left it, and the human abutments were seriously and perhaps fatally damaged.

Two Years for St. Louis Motorists.

Automobiles in St. Louis county, Mo., must carry both the State and the city license and identification tag on their cars, in spite of the effort of Henry S. Turner to free them of this necessity. Turner applied for an injunction to restrain Louis Alt, license commissioner, from compelling him to affix the city tag. His contention was that the State law specifically asserted: "Said owner shall not be required to place any other mark of identification upon his vehicle." Judge Rule denied Turner the injunction sought, declaring that the provision cited referred only to State marks of identity and not to any provisions that city may have made. He ruled that the city council could compel the display of a city tag in spite of the provision of the State law.

Dates Fixed for Detroit's Contest.

The Detroit Automobile Dealers' Association will hold its annual three days' reliability run on April 29, 30 and May 1. The first day's run will be to Saginaw and the second day to Kalamazoo. The last day's journey will be back to Detroit, a total distance of 412 miles. The cars will be placed in one class, the only stipulation being that they must be of standard classification. Penalties will be imposed for time spent in repairs and for being late at controls.

ALASKAN ROUTE IS ABANDONED

American Entry Finds It Impossible—Returning from Valdez and Will Follow Others to Siberia.

No race ever developed a more complicated or perplexing situation than now exists in the New York to Paris scramble. Finding the Alaskan trails from 10 to 15 feet deep in soft snow and not even as wide as the car, the Thomas party, the only American members of the expedition, and the leaders up to this point, were obliged to turn back after a stay of a little over one day at Valdez. News of this reached the Italian and French contingents Tuesday of this week, on their arrival at Seattle, and with common consent they turned about and took the first boat leaving for Yokohama. From that point, they will cross Japan to Tsuruga, a distance of 200 miles and more, and ship their cars to Vladivostok.

The Thomas car, which is expected to reach Seattle to-morrow, on its return from the north, will be shipped to Vladivostok direct, on Saturday. Allowing for delays in Japan, the two parties probably will reach Vladivostok at about the same time.

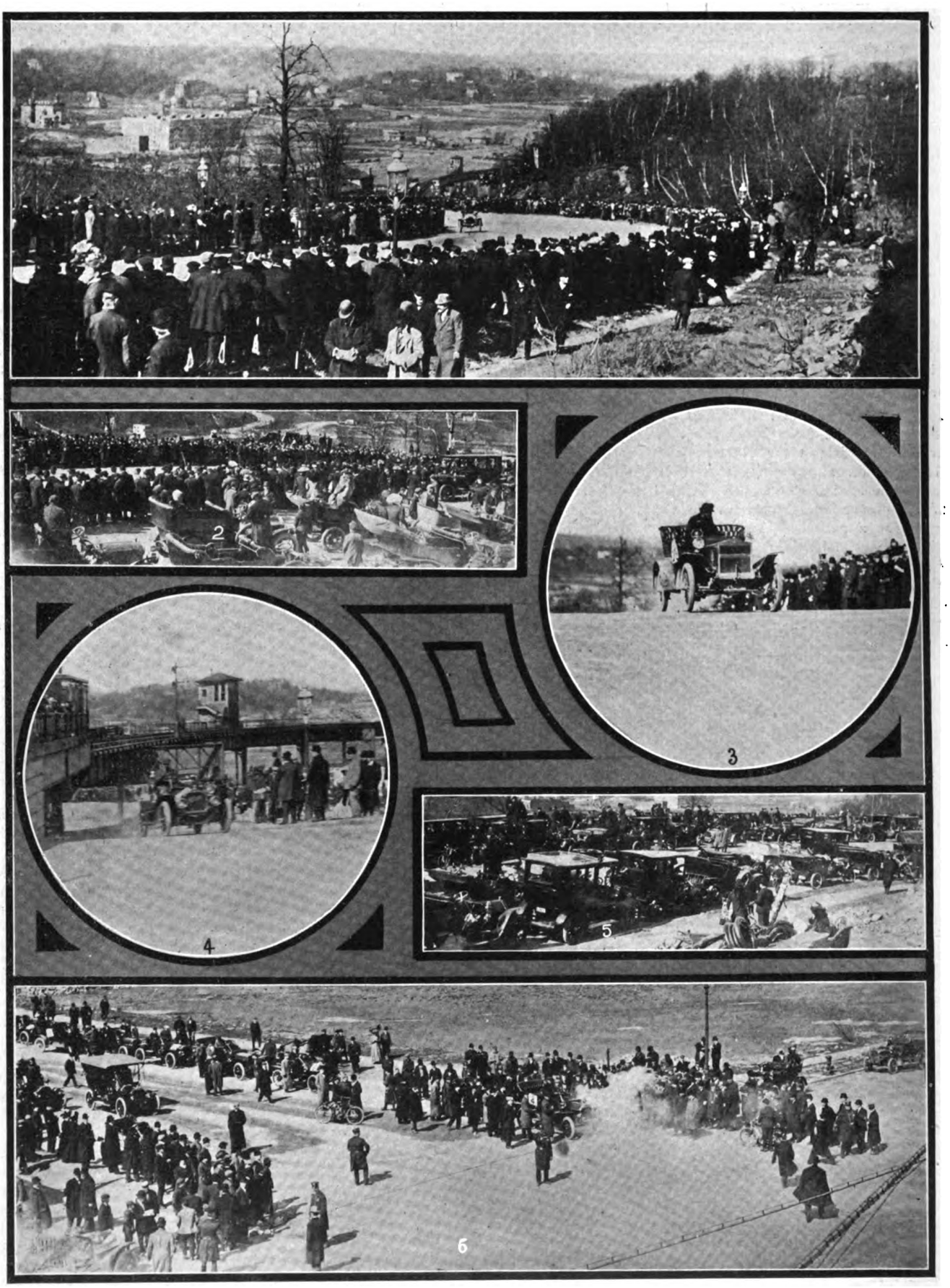
Should the Italians reach the starting point ahead of the American party, it is stated they will be ordered to await their arrival according to the terms of an agreement entered into by representatives of the respective companies while the Thomas car will still in San Francisco. Even so, the Thomas car will have lost its two weeks' lead, and will start on foreign soil on even terms with the others. It will thus stand a chance to win the race for the third time as the Thomas people explain. They say:

"It has already defeated the entire field by a sufficient margin to prove finally and conclusively that it is the best car for American road conditions and American road travel. Secondly, it has won the race according to the original rules, by going farther over the original course than any of the other competitors. It now remains for the Thomas, starting on an even footing with the foreigners on foreign soil, to demonstrate its superiority over these cars on their soil as conclusively as it did in its own country."

The oft-repaired German Protos car made another start from the Union Pacific railroad repair shops at Odgen, and headed over the road for Seattle, last week, but broke down after proceeding as far as Pocatello, Idaho, and was shipped to its destination on a flat car. It is announced that it will go to Siberia with the Thomas car, and continue the race as a "non-contestant," but as later reports say that Lieutenant Koeppen, its conductor, has dissipated his entire personal fortune on the venture, who will "pay the freight" appears uncertain.

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SCENES AT THE FORT GEORGE HILL CLIMBING CONTEST.



1—General View of the Hill and the Crowd. 2—Spectators Massed Beside the Course. 3—Charles Fleming (Maxwell), Winning in His Class. 4—The Narrow Pass Under the Elevated Railway. 5—Automobiles Parked on the Hill. 6—General View at Starting Point.

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CARNIVAL SPORT AT FORT GEORGE

Biggest Hill Climb Ever Viewed by Thousands—White Finishes both First and Second in Free-for-All.

The "King" and the "Queen" having had their brief reign, the next brilliant page in the history of New York's automobile carnival last week was turned on Thursday, 9th inst., when the hill climb up the Fort George incline took place. In point of competitors it was the biggest hill climb that has yet been held in America, no less than 71 cars being sent up the 1900-feet. 10 per cent. grade in less than two hours. With a squad of mounted police at the foot of the grade and a score or more of ordinary "cops" lined along both sides of the Belgian block course, the competing drivers had no fear at any time that they might charge into any of the 10,000 or more spectators that witnessed the short flights. The Belgian blocks were somewhat "cobbly" and without intending a pun, it follows that the steering wheels were decidedly "wobbly" as the cars bumped over the rough surface. There was no confusion at any time and the instant one car was reported at the finish line, another was immediately dispatched from the start, the finishing cars returning to the base of the hill by a back route.

The fastest flight of the day was made by Walter C. White, of Cleveland, when in the free-for-all he flew up the slope in his odd looking White steamer in 32⅕ seconds, an average of 40.2 miles an hour. White has the unusual distinction of paradoxically finishing first and second in the same event. He entered two cars and in the second one White scored the second best time in the same event, the second flight requiring ⅕ second more than its predecessor. The fastest time in the stock car events was scored by P. J. Robinson, Stevens-Duryea, who won the class for six cylinder cars costing more than $4,000 in 38⅘ seconds. Two features of the meet were the even distribution of honors, and the close times in all events. J. W. Swan, Corbin, and William Bourque fought a real battle in two classes, both going to the former by narrow margins. Charles Fleming, Maxwell; Ward Olney, Mitchell; Robert Burman, Jackson, and P. J. Robinson and Guy Vaughn were among the other prize winners, while H. E. Wagner beat Robert Clyde by nearly half a minute in the electric class. Each rode in a Babcock electric and the big crowd cheered when both pulled up the hill in good time. Charles Lane, White, had a walkover in the steam car class.

A more picturesque spot than Fort George hill for a hill climbing contest cannot be found around New York. The only thing that mars its beauty is the sight of prosaic apartment houses in the distance and the prevalence of theatrical and real estate bill boards on the hill itself. For this reason the peep of the Hudson river through two massive hills off to the north loses its value as a scenic delight. The day was perfect, excepting for the strong breeze that made more than one unfortunate wish he hadn't put his winter overcoat under the protection of moth balls at the sign of triple balls. The only persons who did not seem to mind the wind were several Postal messenger boys who carried on a game of ball in a lot at the bottom of the hill, and the entire Junior class of New York University. The students were enjoying a three days' suspension for having ducked a fellow student in the college fountain, and the hill climb occurred at the right time for them. The only absent one was the student who had been hazed.

It was unmistakably demonstrated that a New York gathering is not a souvenir crowd. Anticipating a thriving business, all the button men had laid in a big supply of dinky little "carnival buttons" and flags. A hasty survey of the crowd failed to reveal a dozen sales. Even the youngster who sweetly called out "sowveneer" hats, and advertised his wares by wearing two—one red, the other green—at diverging angles on his head, was disheartened. One peanut vendor almost had to be restrained from casting himself before the oncoming juggernauts.

"Jees, vat a crowd!" he exclaimed disconsolately, "no vun vants to eat peenits today."

It would not be fair to pass without notice of the cripple who mechanically rolled tumblers back and forth on a board and assured all who stopped to listen that he had the only "real hill climbers," although his tumblers only rolled one way—down hill.

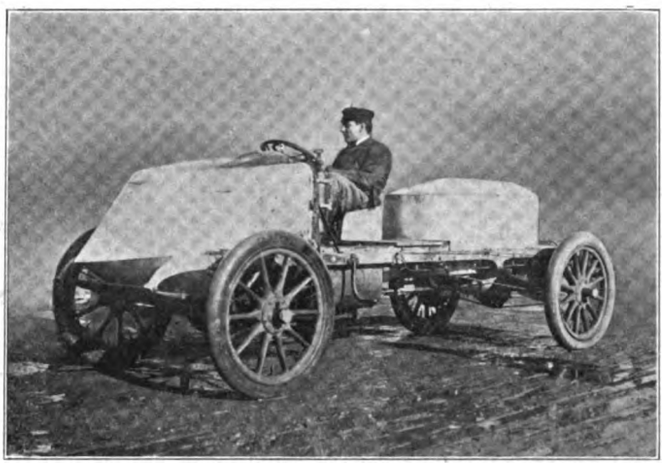
It was a bad day for business of this sort. The crowd was not buying. It was a free show, so what was the use of spending one's money recklessly? Seeing that the crowd didn't "bite," the fakirs, like Arabs, silently stole away before the last two events, with determination on their faces to make up the financial loss at the next Richmond county fair.

All the nurse girls from the Inwood and Spuyten Duyvil districts, not forgetting one white-aproned servant who came all the way from the "Bron-nix," were there. The last named caused some excitement when Walter White made his spectacular flight. The nurse girl was so eager to get a view of the racer that she quite forgot her charge, and perambulator and Napoleon Newlywed started to emulate White by racing down the hill, it being easier going than would have been the opposite direction, and besides it was pointed that way. A convenient rock stopped the perambulator fifty feet from where it had started and besides a frightened cry, that was a cross between a wail and a whoop, Napoleon was unhurt. The maid was more frightened than anyone else.

This was the only near-casualty of the afternoon, which is remarkable. Fort George hill itself is wide enough to pre-



J. W. SWAN (CORBIN), TWO TIME WINNER



WALTER C. WHITE (WHITE), WINNER OF FREE-FOR-ALL

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clude any possibility of accident on its wide curves, but to get upon the hill proper the cars had to pass through a needle's eye at the bottom where the overhead subway entrance makes the road at that particular point just about wide enough for a car to squeeze through and nothing to spare. The fact that all the events were from a standing start reduced the danger at this point to the lowest possible minimum, and it is to the credit of the drivers' trained eyes that not one miscalculated the width of the "squeeze."

The hill presented an animated appearance. All the competing cars were parked in the streets at its base, together with several hundred pleasure vehicles, while that many more afforded grandstands at the summit. The hill on both sides of the street was lined with spectators three or four deep, while all the high rocks overtopping the east side of the street, above which the Fort George pleasure grounds rise "moneymakingly," held living lichens. Near the top of the hill, in sight of the finish line, was a natural amphitheatre which held several thousand people, and which resembled the bleachers at a league ball game in mid-summer.

About 200 White rooters stormed the highest and biggest rock half way up, and from their lofty citadel kept the crowd informed that the White was going to shove Father Time into the Atlantic ocean, Hoboken or some other place. The White company had distributed several thousand aluminum "noisy snapper jacks" and the crowd worked over time to get a putty-put-put-putty-put-put sound from them. When the several thousand went off at once, the battle of Port Arthur must have been a Quaker first day meeting in comparison.

There was no need to consult programs when White finally did shoot up the hill in a cloud of steam. His half-smile is almost historic, and besides he wore the same Norfolk jacket, corduroy "knickers" and leather cap that have made him conspicuous in every event of importance for the last three years. White has other clothes but this is the outfit he always dons when he has a victory in mind. Thus far they have proved a pretty good mascot.

The meet got its start when two Maxwells, driven respectively by Charles Fleming and J. Ross, competed in the class for gasolene cars costing $850 and under. Fleming beat his stable mate by some seconds in 1:19⅗. Ward Oldney, Mitchell, had his innings in the next round for cars costing between $851 and $1,250. The electrical timing apparatus which, by the way did not once go out of commission, gave him 1:07⅕. R. L. Lockwood, Reo, and Thomas Forbes, Overland, tied for second place in 1:14⅕. This was the first time the Overland has competed in the east. Robert Burman, Jackson, who finished last in that class, made the best time in the event for cars between $1,251 and $2,000. The apparatus gave him 52⅗ seconds, and Harry B. Tucker, Corbin, gave him a close "rub" by reaching the top in 55⅘. Chris White, Aerocar, was third.

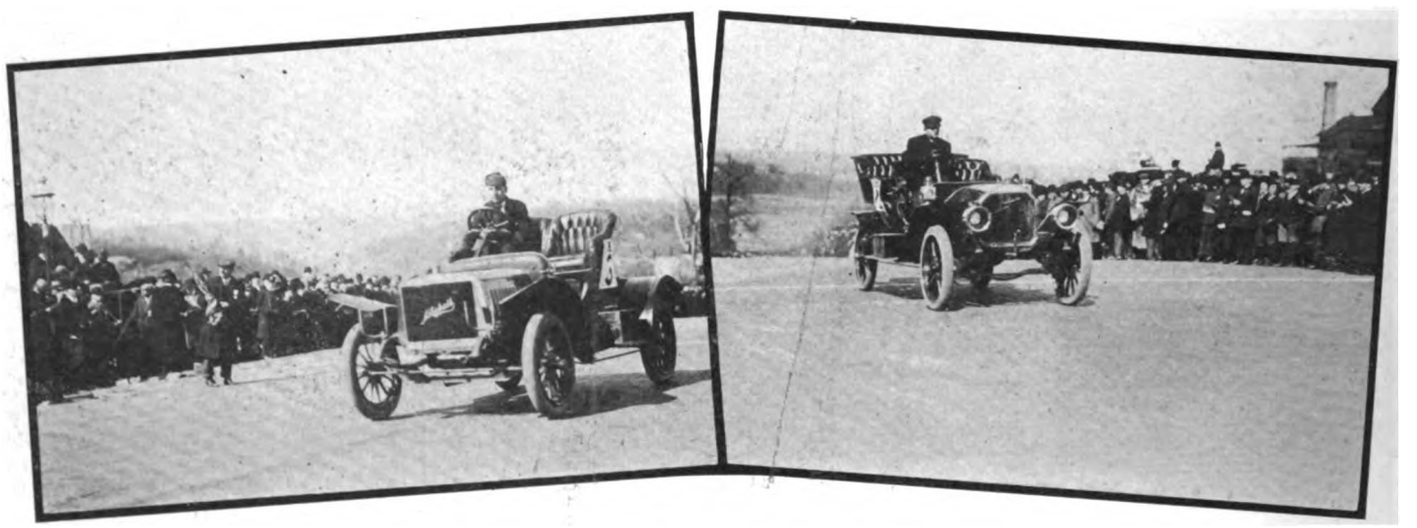
P. J. Robinson took the next two events —for gasolene cars between $3,001 and $4,000, and for six cylinder cars costing more than $4,000. In the former event he was timed in 45 seconds flat, with Frank McCaffrey, Cleveland, the runner-up, in 55⅘, and in the sixes' picnic he drove a 50 horsepower car in the fast time of 38⅘. Guy Vaughn was second.

The biggest event of the meet, which brought out 15 starters, was the class for gasolene cars costing between $2,001 and $3,000. It produced the finest competition, so far as hill climbing sport goes, as all the cars, with one exception, scored under a minute. It went to J. W. Swan, Corbin, who made a clever ascent in 43⅘ seconds, with William Bourque, Knox, a close second in 46⅖. J. P. Grady, a veteran hill climber, was timed at 47 seconds flat in his Pope-Hartford, while the next best was Charles Miller, Stoddard-Dayton, who took four-fifths of a second longer to finish. Leonard Zengle, Pennsylvania, and J. P. Grady, in another Pope-Hartford, ran a dead heat for fifth place, each being timed in 49 seconds.

Swan and Bourque had another battle royal in the open class at the same price limitations, the former winning by 2⅗ seconds in 42⅖. Barbour, Corbin, was third, and F. Cimiotti, Pullman, fourth.

The class for four cylinder cars costing more than $4,000 looked like a family party, as nine of the competing cars wore the same name plate. Guy Vaughn won in 42⅕.

The free-for-all brought out the "big ones" and as the cars in this event did not have to conform to catalogue specifications, and could strip if their drivers desired, it was natural that fast times should result. Walter White drove the same car that made the fastest times at the Wilkes-Barre and the Cleveland climbs last year. Later he steered another stripped White in the same event, and came within one-fifth of a second of the record of 32⅕ seconds, which he made with his racy looking car. Emanual Cedrino, with a 60 Fiat Cyclone racer, was third in 37, and P. J. Robinson was fourth. Edgar Apperson, Apperson, was timed in 38 seconds, and John B. Ryall, in his big Matheson finished sixth. The summaries:



WARD OLNEY (MITCHELL) AND ROBERT BURMAN (JACKSON), COMING TRIUMPHANT OVER THE BROW OF THE HILL

Free-for-All.

1	Walter C. White	30 White	0:32⅕
2	Walter C. White	30 White	0:32⅖
3	Emanuel Cedrino	60 Fiat	0:37
4	P. J. Robinson	50 Stev-Duryea	0:37⅗
5	Edgar Apperson	62 Apperson	0:38
5	John B. Ryall	60 Matheson	0:40⅘
7	J. P. Grady	30 Pope-Htfd	0:42⅘
8	Wm. Bourque	30 Knox	0:43⅘
9	Leonard Zengle	50 Pennsylvania	0:45⅕
10	Robt. Guggenheim	35-45 Renault	0:47⅘
11	H. S. Hodson	40 Stod-Dayton	0:49
12	Clarence H. Lane	20 White	0:52⅕

Four Cylinder Gasolene Cars—$4,000 and Over.

1	Guy Vaughn	30-60 Stearns	0:42⅕
2	D. E. Farrell	30-60 Stearns	0:42⅖
3	Kingsley Swan	30-60 Stearns	0:42⅗
4	L. M. Travis	30-60 Stearns	0:42⅘
5	Frank Lescault	50 Simplex	0:43⅕
6	Carl Broessel	50 Simplex	0:44
7	A. J. Picard	30-60 Stearns	0:44⅘

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8	Barney Oldfield	30-60	Stearns	0:46
	Halstead Swan	30-60	Stearns	0:46
9	Arthur Warren	30-60	Stearns	0:47
10	Irving Fickling	30-60	Stearns	0:48⅗
11	Robert Guggenheim	35-45	Renault	0:49

Steam, Gasolene or Electric Cars, $2,001 to $3,000.

1	J. W. Swan	30	Corbin	0:42⅗
2	Wm. Bourque	30	Knox	0:45
3	W. G. Barbour	30	Corbin	0:48⅘
4	F. Cimiotti	40	Pullman	0:49⅘
5	Jerry Lynch	25-30	Knox	0:52⅘
6	Clarence H. Lane	20	White	1:07

Gasolene Cars, $2,001 to $3,000.

1	J. W. Swan	30	Corbin	0:43⅘
2	Wm. Bourque	30	Knox	0:46⅗
3	J. P. Grady	30	Pope-Htfd	0:47
4	Charles Miller	40	Stod-Dayton	0:47⅘
5	Leonard Zengle	50	Pennsylvania	0:49
	J. P. Grady	25	Pope-Htfd	0:49
6	F. Cimiotti	40	Pullman	0:49⅘
7	Philip Heiner	30	Pope-Htfd	0:50
	W. G. Barbour	30	Corbin	0:50
8	C. Pentony	25-30	Pope-Htfd	0:50⅕
9	H. S. Hodson	40	Stod-Dayton	0:54⅗
10	D. C. Teeter	45	National	0:55⅗
11	J. C. McCaffrey	45	Glide	0:58⅗
12	R. S. Crawford	40	Crawford	0:59⅘
13	Arthur Weisbecker	35	Oldsmobile	1:00⅕

Gasolene Cars, $3,001 to $4,000.

1	P. J. Robinson	35	Stev-Duryea	0:45
2	Frank McCaffrey	40	Cleveland	0:55⅕
3	W. W. Burke	42	Mora	0:58⅕
4	Ralph Del'alma	40-45	Allen-Kings	1:05⅕

Six Cylinder Gasolene Cars Over $4,000.

1	P. J. Robinson	50	Stev-Duryea	0:38⅘
2	Guy Vaughn	45-90	Stearns	0:46⅘
3	Charles Gatzen	65	Hotchkiss	0:52⅕
4	Adam Arnold	45	Acme	0:55

Steam Cars Only.

1	Chas. H. Lane	20	White	0:54

Gasolene Cars, $1,251 to $2,000.

1	Robt. Burman	35	Jackson	0:52⅕
2	Harry B. Tucker	24	Corbin	0:55⅘
3	Chris White	30	Aerocar	0:58
4	A. D. Edgerton	35	Mitchell	1:00⅕
5	Charles Fleming	24	Maxwell	1:02⅗
6	Robt. Morton	30	Pullman	1:05⅗
7	E. Steunewald	32	Oldsmobile	1:11⅕

Gasolene Cars, $851 to $1,250.

1	Ward Olney	20	Mitchell	1:07⅕
2	R. L. Lockwood	16	Reo	1:14⅕
	Thomas Forbes	22	Overland	1:14⅕
3	Robert Burman	22	Jackson	1:34⅗

Gasolene Cars, $850 and Under.

1	Charles Fleming	14	Maxwell	1:19⅕
2	J. Ross	14	Maxwell	2:22⅕

Electric Cars, all Types.

1	H. E. Wagner		Babcock	1:24
2	Robert Clyde		Babcock	1:29⅘

Another Climb up Giant's Despair.

The differences between the Wilkes-Barre Automobile Club and Walter White and D. Walter Harper, over the hill climb last year, having been satisfactorily settled, the energetic Diamond City club has announced that it will again hold a hill climbing contest up the now famous Giant's Despair mountain, just outside that city, on Decoration Day, May 30th. The club refused to allow steam cars to compete in the free-for-all event last year and Harper and White both protested to the American Automobile Association and were sustained. The Wilkes-Barre Club has since made a satisfactory settlement and the climb will be repeated this year.

As they did not wish to have the date of their hill climbing contest conflict with similar events in other cities, the promoters of the Cleveland hill climb have postponed their contest from Memorial Day to June 13. The annual meeting of the Ohio State Automobile Association has been set for the same day as the hill climbing contest.

GARY HEADS MR. SHATTUCK'S CLUB

Other Regular Nominees Elected Without Opposition—Retiring President Showers Boquets on the Organization.

With Judge E. H. Gary as president, the regular ticket submitted to the members of the Automobile Club of America, at their annual meeting on Tuesday last, 14th inst., went through like a dose of oil. Judge Gary's colleague's are: Vice-president, Henry Sanderson; 2nd vice-president, William G. McAdoo; 3d vice-president, Robert Lee Morrell; treasurer, Edgar L. Marston; one governor for one year, Horace Porter; three governors for three years, Waldron Williams, Frederick D. Underwood, William Pierson Hamilton; governors for four years, Cornelius Vanderbilt, Schuyler Skaats Wheeler, Colgate Hoyt. Members of the board of governors who hold over are John Jacob Astor and George F. Chamberlin, of the Class of 1909, and Dave Hennen Morris, Albert R. Shattuck and Winthrop E. Scarritt, of the Class of 1910.

From the outside standpoint the report of Colgate Hoyt, the retiring president, was of more than usual interest because it not only recommended withdrawal from participation in show promotion but also because it touched on the cause of the withdrawal of the club from the American Automobile Association. Throughout the entire report there is a clearly defined disposition to make the club appear as a national organization, which, of course, it is not. In dealing with the subject Mr. Hoyt says:

"Our club is the only automobile club in America recognized in automobile circles in any foreign country, and it is everywhere regarded as the national club in this country and has binding treaties with every foreign national club of importance."

Although the club withdrew from the A. A. A. because Mr. Shattuck thought automobilists should pay a registration fee of about $40 per year and he and Lawyer Niles and a few others believed that a man's right to use the public roads should be made revokable, President Hoyt, or whoever compiled his report, has the sublime and unsalted courage to try to claim some credit for the new bill now pending in the New York legislature. The elimination of the "miles per hour clause" gives him great pleasure.

Among recommendations contained in the report is one for an "international touring car trial, somewhat on the lines of the trial to be held by the Royal Automobile Club of Great Britain." Also that the club should organize a congress of automobile clubs and road commissioners from different states to promote a national automobile law, uniform state legislation, continuous inter-state highways and to conduct experiments "to determine the best preservatives for road surfaces and the abatement of the dust nuisance."

The report recommends that the club should annually donate a medal, to be awarded to the police officer of New York City "who, in attempting to protect the public's safety, exhibits the greatest bravery and risk to himself."

With a gentle hand, Mr. Hoyt administers a slap to the A. A. A. and an approving pat on the back to the A. C. A. in the paragraph which treats of the Federal bill which "our club" did not endorse as it was "in the opinion of eminent counsel, unconstitutional in its provisions. The subsequent rejection of the bill by the House Committee on the Judiciary on the ground of its unconstitutionality justifies the wisdom of your law committee"—which is largely Niles.

Among the "numerous activities" of the club were the labors of the committee on public safety which distributed to automobilists and to the press more than 200,000 copies of a report urging strict observance of traffic regulations and referring to the use of the horn, acetylene lights, smoky exhausts and speed limits.

The club now has 1,540 members, a net gain of 229 during the past year.

New York Buying New Cars.

Two new automobiles have been added to the equipment of the New York police department. One of these was purchased after bids had been submitted on specifications drawn up by the city's engineering department, the successful car being a Stevens-Duryea. Although the catalog specifications of this make of car are not in accord with the specifications issued by the police department, the manufacturers made the necessary changes which principally were in the composition of the metals used in the axles and crank shaft.

After the Board of Aldermen had refused permission to Commissioner Bingham to purchase two cars in the open market, without advertising for bids, they partly reversed their own decision by again taking up the subject and granting permission for one car to be bought in this way. As the car was for the use of the first deputy commissioner, the selection was left to him and he chose a Berliet.

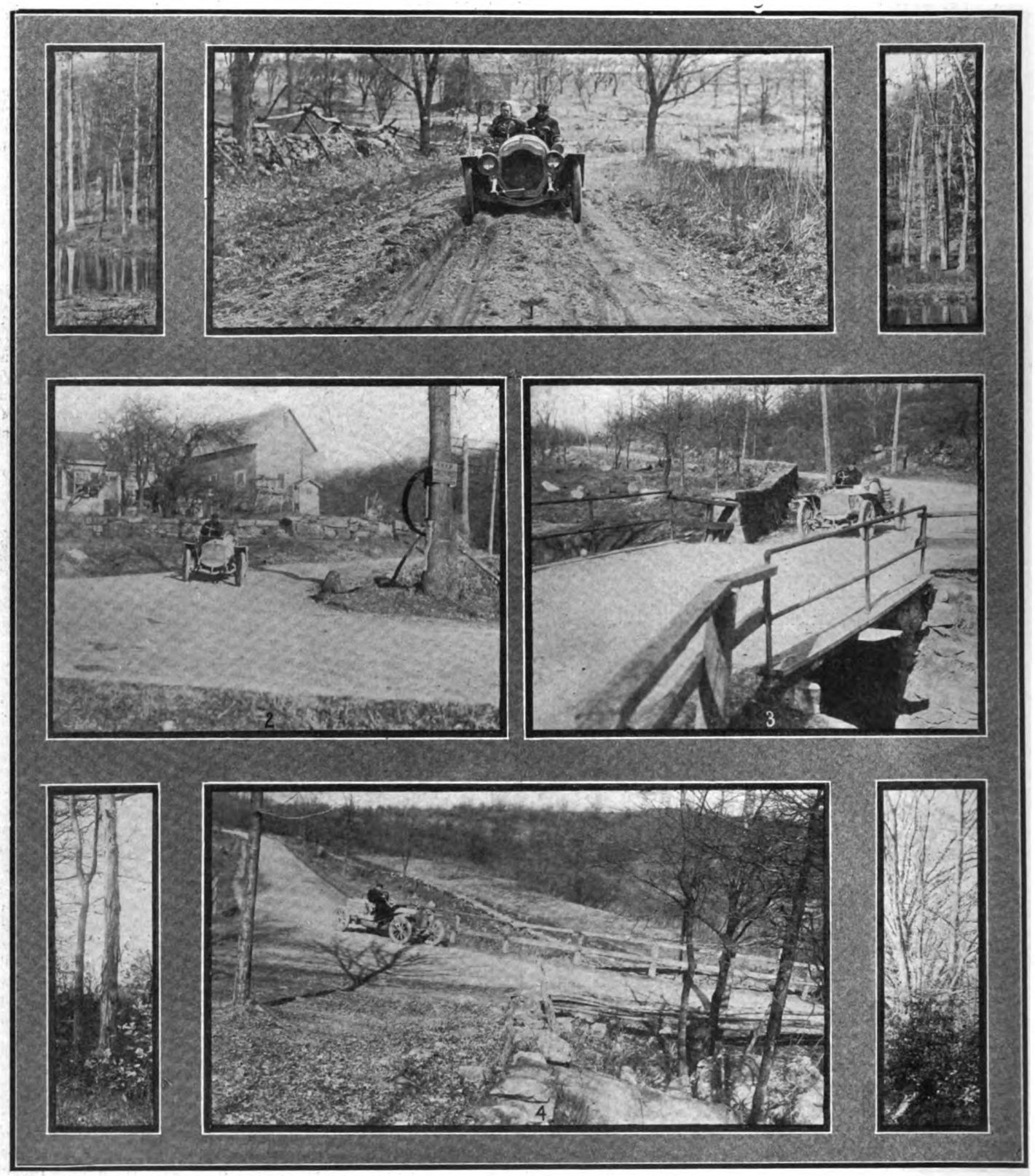
It is reported that the Department of Docks and Ferries shortly will advertise for a car. The specifications will be the same as those used by the police department.

Two Hills for Chicago's Club.

May 15th will be the date of the Chicago Motor Club's annual hill climb up the Perry and Phillips mounds at Algonquin, Ill. Twelve events in all have been provided, separated into four divisions, including two amateur events and a team competition, in which latter event the three cars making the best average by club formula will be declared the winner.

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SOME OF THE DANGER SPOTS ON THE BRIARCLIFF COURSE.



1—Muddy Road Near Pines Ridge. 2—One of the "Hairpin" Turns. 3—Sharp Turn on to a Country Bridge. 4—Winding Road Down Hill to a Right Angled Turn.

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STARTING ORDER AT BRIARCLIFF

Twenty-two Entrants Draw Positions—The Men Who Will Flirt with Death on the Corkscrew Course.

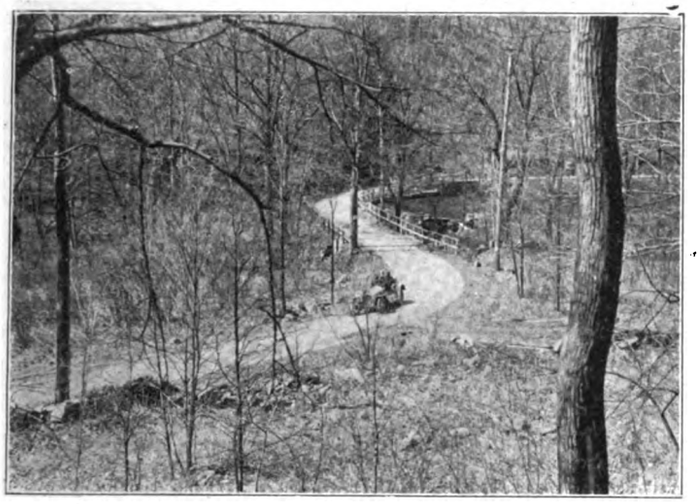
Unless God is unusually good to the Automobile Manufacturers' Committee and to the contestants themselves, the story of the race for the Briarcliff trophy, which occurs on Friday of next week, 24th inst., will be one of the saddest stories of the sport ever penned. As the Motor World has stated on previous occasions, the course in Westchester county, New York, which has been selected for the contest, is as full of tragic invitations as a porcupine's back is full of quills. Indeed, "prepare to meet thy God!" is the warning painted by some religious crank on a boulder that marks one of the many sharp, right-angled turns which stud the course that is just a little straighter than a corkscrew; and it is a warning wholly appropriate to the forthcoming occasion.

If the plans, so far as they are known at present, are carried out, twenty-two drivers in that many cars will start, beginning at 4:45 a. m. on the 24th inst., for a ten laps' race around the dangerous course. As it measures 30 miles the full distance of the race will be 300 miles.

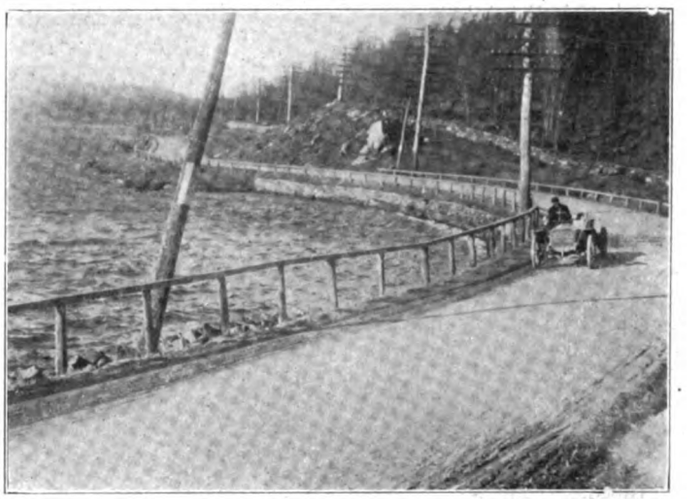
Positions for the start were drawn by representatives of the contestants on Tuesday of this week and Prossen, who is to drive a Bianchi, secured the right to start first by drawing "No. 1." Cedrino will start second in the Fiat. The official order of start is as follows:

1 Prossen, 50 Bianchi.
2 Cedrino, 60 Fiat.
3 Lytle, 50 Apperson.
4 Strang, 50 Isotta-Fraschini.
5 Leland, 30 Stearns.
6 Parker, 60 Fiat.
7 Michener, 45 Lozier.
8 Vaughn, 30 Stearns.
9 Mulford, 45 Lozier.
10 Murphy, 30 Maja.
11 Poole, 50 Isotta-Fraschini.
12 Roberts, 60 Thomas.
13 Oldfield, 30 Stearns.
14 Bernin, 50 Renault.
15 Robertson, 50 Panhard.
16 Hilliard, 30 Hol-Tan.
17 Campbell, 30 Allen-Kingston.
18 Bloch, 50 Renault.
19 Harding, 50 Isotta-Fraschini.
20 Bergdoll, 50 Benz.
21 Seymour, 50 Simplex.
22 Watson, 50 Simplex.

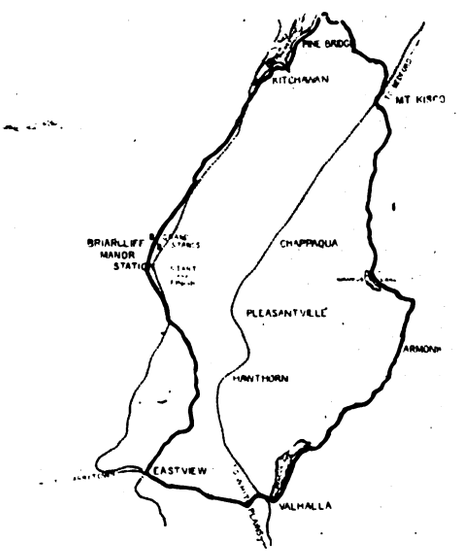
It has not yet been announced at what interval the cars will start on the morning of the race. In fact, some of the details seem to be somewhat clouded. Work on the grandstand was started only this week and the task of oiling the course and toning down some of its worst portions also has only begun. No announcement has been made as to how the promoters intend to police the course, although a rumor is afloat that several regiments have been "invited" to keep in order the throng of spectators that probably will flock to Westchester county to witness the contest.



ONE OF THE MANY CORKSCREW TURNS



SERPENTINE ROAD ALONG KENSICO LAKE



MAP OF BRIARCLIFF COURSE

Although all the drivers entered for the race have not yet "felt" the course in their racing stock cars, preferring to wait until the roads are made at least semi-safe, a number of them have taken chances by daily early morning spins around the corkscrew circuit. The ditching of cars has been almost a daily occurrence.

Montague Roberts, Thomas, was one of the first to damage his car. The accident to Roberts's car occurred on Friday morning last, and fortunately for him and his mechanic neither was injured, but since that time Roberts has been using another car in his practice runs. Roberts attempted to take the sharp curve just below the site of the grandstant at Briarcliff Manor too fast after passing another car, and a skid into an embankment was the result. Monday, the 13th, proved an unlucky day for Joseph Seymour, who is to drive one of the Simplex cars. Seymour left the narrow road in the Mount Kisco section and crashed into a stone wall. The car was damaged somewhat, but the driver and passengers escaped injury. Daniel Murphy came to grief near the Kensico reservoir Tuesday morning. He also attempted to rush a turn in his Maja car and it turned turtle. Murphy received a bad gash in his leg, but will be able to walk in a day or so. Accidents to touring cars are of such common occurrence as to excite no comment. There is scarcely a mile of absolute straightaway in the entire thirty miles, so it is plain to see that the possibilities for undesirable sensations are immense.

Not any portion of the course can be described as safe, but some of the turns are positively dangerous. There is a bad turn just below the grandstand at Briarcliff and another where the course zigzags around Hawthorn. A few hills are encountered before Valhalla. Probably the best portion of the course is from Valhalla to Armunk, until Mount Kisco is reached. From Mount Kisco to Pines Ridge it is described as "fierce," while the stretch

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from Eastview to Valhalla is just as bad. On both these legs the road has been so badly cut up, and abounds in so many ruts, that it will be a gigantic task to make the road half-way safe before the day of the race.

If all the cars that have been nominated start, the race cannot but develop into the longest one of its kind ever held. The fastest time recorded in the trial spins has been 45 minutes for one lap, thirty miles, and the majority of the cars that have been timed have done not much under one hour. In view of this it would seem that the race will run for at least eight or nine hours. As the road is so narrow in places that it is practically impossible to pass another car while going at full speed, the cars that get an early start doubtless will have the best of the odds.

Eleven American and the same number of foreign cars will be represented. The Bianchi, Fiat and Isotta-Fraschini are of Italian origin; the Benz, of German, and the Maja is of Austrian manufacture. The Renault and Panhard are French cars. The American makes represented are the Lozier, Stearns, Thomas, Hol-Tan, Simplex, Apperson and Allen-Kingston. As a contest between fate and skill the Briarcliff trophy race should prove an exciting example. The most skilled drivers in America will flirt with death, such well known cracks as Lytle, Leland, Strang, Oldfield, Michener, Vaughn, Poole, Roberts, Bernin, Robertson, Hilliard, Campbell, Bergdoll and Harding being included in the list. Some of them have families.

Colgate Hoyt has been named as referee and A. R. Pardington associate referee.

Turkey's Aversion Begins to Weaken.

It would appear that Turkey's constitutional aversion to the motor vehicle is in a fair way to be overcome. According to a report from Consul William C. Magelssen, of Bagdad, a commission from Constantinople, headed by Nazim Pasha, which has been investigating economic conditions in Mesopotamia, has recommended the establishment of three automobile routes leading from that city. These will open regular communication with Damascus, Aleppo and Mosul, respectively. The recommendation is now receiving attention, he continues, and it is believed that the plans will be carried out. He states that it is likely that heavy vehicles seating at least six passengers will be required.

Motor Bus Service for City of Mexico.

One, of the first installment of five motor omnibuses, is about to be put into service in the City of Mexico by a local company which has been organized for the purpose. The remainder of the lot will follow in a short time. The machines have been ordered from an English firm which is building the equipment of one of the London companies, and are of the single deck type, seating 24 passengers.

UNEVEN ENFORCEMENT OF LAW

Why the Chauffeur has a Grouch—Compelled to Obey Road Rules that Horse Drivers Persistently Ignore.

"I don't want to be known as a man with a perpetual grouch," said a professional chauffeur, whose driving mainly is done through the streets of New York City, and its suburbs, "but I've had a grievance for so long that I am beginning to think it may become permanent, unless something is done to remove the cause of it.

"We've all heard so much about 'unjust discrimination' against automobiles and automobile owners that the phrase has become tiresome, but usually the 'discrimination' that is talked about, is in reference to laws and legislation, license fees, speed rules, etc. Yet there is another feature, or may be the same one in slightly different guise that roils me, and that is the one about road rules, or, as we say here, street traffic regulations.

"Consider first the automobilist: If he drives a little faster than the law allows, he gets pinched; if he goes downtown on the uptown side of the street, he is pinched again; if, through accident or design he neglects to obey a policeman's signal, he has either to back up, turn around or get pinched; in other words, he has to be mighty good all the time and obey all the rules, or he is in constant trouble with the authorities. Understand, I am making no complaint about these things; I am entirely willing to obey all the laws made to govern traffic, but I think that the traffic laws should be impartially enforced, and that horse drawn vehicles should be compelled to obey as well as automobiles.

"While horse drawn vehicles are compelled to live up to the regulations that I have quoted, they are permitted absolutely to ignore one rule that, in itself, does not affect the automobilist very much, though the fact that others are permitted to ignore it frequently places the automobilist in a serious predicament; that is the rule which seeks to compel slow moving vehicles to keep to the right.

"Any driver of a motor car can recall numerous occasions when collisions have been narrowly avoided, or perhaps actually did occur, because his only way to pass a load of hay, a moving van or some other heavily loaded, slow moving vehicle, traveling in the same direction, lay in going to the right of it instead of passing it on the left as the regulations provide. There is no earthly reason why these vehicles should not be driven on the right side of the street, and there is absolutely no reason why the police should not compel them to do so, but the cops do not compel it; and that constitutes the discrimination that is causing my grouch.

"Fourth avenue in Brooklyn, is a good illustration of the point I make. Although this street is boulevarded and has a roadway about 25 feet wide on either side of a 10-foot neutral ground, it is not popular with automobilists. The street is asphalted and leads to the macadam roads which go to the Crescent Club's country house, and the U. S. military reservation at Fort Hamilton. Fourth avenue is also the direct road to one of the most beautiful driveways in the world. The 'Shore Road,' and yet the avenue is used very little in the day time by automobilists simply because the police, who are detailed for the purpose, fail to enforce the traffic regulations, with the result that when a motor car does use the streets its course resembles that of a ship without a rudder. No other good roads are near at hand, and the motorist must go a mile or more out of his way to reach the same points, but invariably he prefers to take the longer course, rather than to try to navigate through a street which should be and could easily be made a safe and delightful thoroughfare.

"Some time ago I learned that officers of the Long Island Automobile Club had taken up the matter and tried to have the rules of the road enforced. I spoke to one of the bicycle policemen who are stationed on the avenue, asking him why he didn't arrest the drivers who wouldn't obey the law.

"'Arrest them,' he said, 'We did arrest them—took in 18 in one day and the magistrate discharged every one of them and then called us down for interfering with poor working men, as they expressed it, and letting rich automobilists do as they please; so what's the use of taking them in if the judges will not support us?'

"There's the unjust discrimination. Because a man is a working man, he's poor, and must be let alone; if he rides in an automobile, he's rich, lock him up. And yet this is a country where all men are supposed to be equal!"

Cabbies Make War on Automobiles.

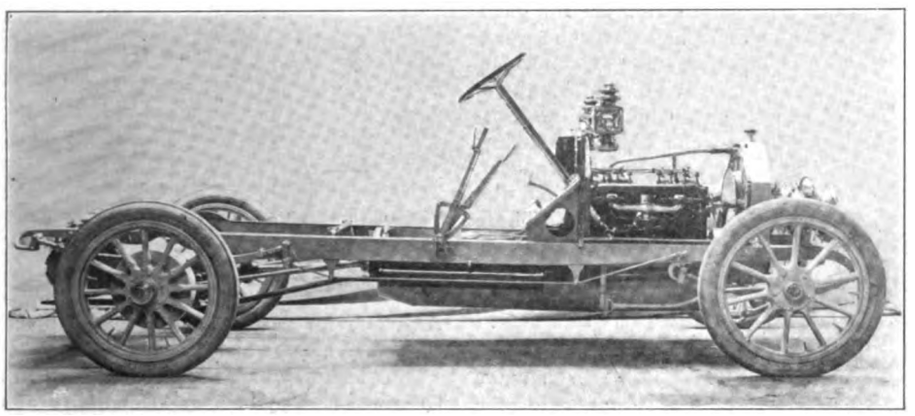
With the influx of Easter visitors to Atlantic City the annual war between cabbies at the railroad stations has begun. Charged with malicious mischief, Herbert Kiger, driver of an uptown hotel automobile, was held last week under $500 bonds for court, upon complaint of Earl Farr, another hotel automobile driver. According to the stories told Magistrate De Hart the men have been having some argument about their respective places in the line of waiting vehicles on the arrival of a train. Kiger is alleged to have told Farr that he would get even with him. The trouble came to a focus when Farr is said to have deliberately charged into Farr's car with the machine he was driving, resulting in the demolishment of the former's machine. Two women who were in the car were nearly frightened to death. Then followed the arrest of Kiger.

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NEW IDEA IN STANDARDIZATION

Special Feature in Mechanism of the P. & S. Product—Details of Design and Construction.

Considerable meaning may be conveyed by no more than two letters on occasion, though ordinarily a good many more are required to convey a definite idea. A case in point is the cryptic "P & S" which is the appellation given to New York City's latest motor car product, marketed by Palmer & Singer. In this instance the significance attached to the letters is that of a sturdy and thoroughly practical machine in which are embodied a sufficient number of original features to give it ample distinction above other products measuring up to it either in power or price.



CHASSIS OF P. & S. "FOUR-FORTY"

The P & S line is composed of five distinct vehicles, mounted on four different chassis, making a line complete in itself. Though widely varying in purpose and size, an ingenious application of the designer's art has made the mechanism practically interchangeable back of the dash boards, so that transmission and running gear parts for the whole line may be stocked without complication, and replacements made with a minimum of inconvenience, both to owner and repairman.

The models are known respectively as the "Four-Forty," "Town and Country car," "Six-Sixty Touring Runabout," "Six-Fifty Runabout," and "Skimabout." Except for the engines, and other items relating to wheel base, location of power plant, and arrangement in other respects, the cars are much alike, as already indicated, so that a study of one involves in a general way a study of the others. One point of difference, however, applying both to the Town and Country model and to the Skimabout, is in the radiator and bonnet construction which in these two instances follows the C. G. V. pattern. The Town and Country car, which is a neat and comely landaulet, also is marked by a double-drop frame, which provides easy access to the passenger quarters without lowering the chassis unnecessarily.

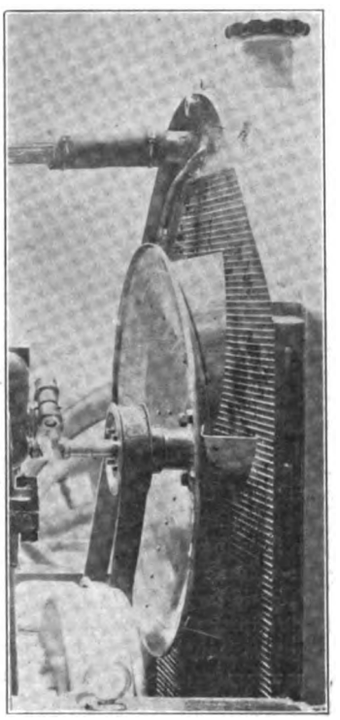
The chassis of the Four-Forty model, which for the first time was put on exhibition at the warerooms of the company last week, reveals these characteristics: Motor, vertical, with cylinders cast in pairs and measuring 5 by 5 inches bore and stroke; with valves mounted in pockets on the right side, thus grouping all auxiliaries and possible adjustments, except the magneto, on the drivers' side and necessitating the lifting of only one side of the bonnet when making inspection and light repairs; double ignition, with two sets of plugs and Bosch magneto; engine control by levers on steering column and accellerator pedal. Transmmission is effected by means of a four-speed, selective gearset affording direct connection on the third speed, and double-jointed shaft to the live rear axle. The master clutch is enclosed in the gear case and is of the popular multiple disc pattern, employing 49 members and affording an unusually large amount of working area. The wheel base is 126 inches, the tires 36 by 4 by 4½ inches.

Of the features which are worthy of special attention may be mentioned among others the springs, which are all of semi-elliptical pattern, of 34 and 52 inches length, front and rear, respectively, and having 13 and 14 leaves respectively. All but the upper leaf in each case are provided with "kitten ears," to prevent disalignment, the upper leaves being of short length and destined to absorb only the rebound. The rear shackles of the front springs are also provided with non-reversing clips which prevent them from turning under in an embarrassing fashion peculiar to some designs.

The steering connections attract attention since the usual ball and socket joints are replaced with clevises and through-pins, the universal motion of the drag link being secured by means of a Hooks joint. The gear itself is of the worm and segment type and with the liberal rake of the steering column comes well in front of the dash.

The brakes are of the double-expanding type balanced as to application of the pull and mounted in mud-proof drums on the rear wheels. In addition to the brakes, a hill-pawl attachment is mounted on the driving shaft just back of the gear box.

The power plant is carried on a subframe running up to the radiator but not including the usual cradle for supporting that member. Instead, the radiator is carried by an original form of ball and socket trunion mounting providing for universal movement due to the weaving of the frame without in the least straining the casing. An important and no less striking feature of the cooling system is the fan which is belted from the auxilliary two-to-one shaft on the left side of the motor, and which, instead of being of the usual direct suction type, is centrifugal in pattern. Its framework is a solid alluminum disc of convex form upon the face of which the blades are mounted. The effect is to drive the dust and dirt which are inducted through the radiator to the outside of the bonnet instead of impinging the gritty particles against the motor itself. A second fan mounted in the fly wheel takes care of the discharge from the rear end of the bonnet.



CENTRIFUGAL FAN ON P & S. RADIATOR

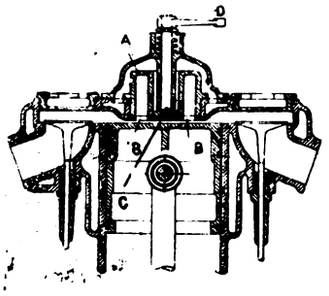
Though of heavy construction and arched at the back to give ample clearance over the rear axle, the frame is trussed through the waist to give added stiffness. The rear axle, which is of cast steel, except for the aluminum housing, is stayed in position by means of the usual torque rod and two radius rods which are joined to the frame on the same transverse axis as the forward universal joint of the drive shaft. The front axle is of I-beam section, of well thought out design and of very evident strength and stability—a quality which is manifest in all the details of the mechanism.

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CONVERTIBLE GAS AND AIR MOTOR

Its Feature of Variable Compression to Aid in Starting and Braking—Simplicity of the System.

Considerable attention is being devoted to the use of compressed air for starting purposes on motors of medium and large size, at the present time, and not a few ingenious arrangements are coming to light accordingly. Typical of these, is a recent foreign device for improving the action of the motor when working on compressed air, which is worthy of especial notice as appearing under the well known name of Berliet. In a word, it is nothing more nor



less than a method of reducing the clearance volume of the cylinder for the time being thus raising the compression, when the motor is being used as a brake, and reducing the volume of air which must be admitted when it is working as a motor, in order to obtain the desired impulse.

The mechanical construction employed is comparatively simple. It is shown in the accompanying illustration, which is the outline of a T-head cylinder of the ordinary type except for the special arrangement in question. This comprises the use of the compression chamber, A, which consists of a separate casting, set into the cylinder head and carrying at its base the seating of the rotating valve, C, which has a series of ports, B-B, which may be made to register with corresponding ports in the lower side of the port, A, or to close the openings, according to the adjustment of the lever, D, above, through which the system is actuated. The valve is held against its seat and rendered air tight by means of a spring which is suitably housed in the upper part of the jacket casting, the latter also furnishing a guide for the valve stem.

When the valve is disposed as shown in the illustration, the ports leading into the compression chamber are open, so that the cylinder affords the usual amount of compression space for the gas, when the engine is run under its own power in the usual way. When the valve in question is closed, however, there remains in the center of the cylinder, only sufficient clearance to allow for the stopping of the piston without its knocking the lower face of the valve, while even with the volume over the valves and in their pockets, required to give proper space to open them, the actual clearance volume is comparatively slight.

In this way, when the motor is being used as a brake, a very high compression pressure may be secured by delaying the opening of the inlet valves until the piston has ended its stroke, while the degree of retardation obtained in this way may be regulated to the required degree, by altering the timing of the valves in any appropriate fashion. The advantage gained in a similar way when the motor is to be run on the simple expansion of compressed air, is of relatively less importance, since that use is limited and of less significance than that involved in retarding the movement of the machine as a whole.

Results of Benzol-Gasolene Tests.

Benzol, as a possible substitute for gasolene as a motor fuel has never been exploited in this country, though numerous tests have been made with it in England. A series of experiments which are now being conducted by Joseph Tracy, the New York engineer, so far as they have been carried out, however, tend to bear out the results of the foreign investigation. These indicate briefly, that if available in sufficient quantities, it would appear to be an efficient and economical source of energy for the motorist's use.

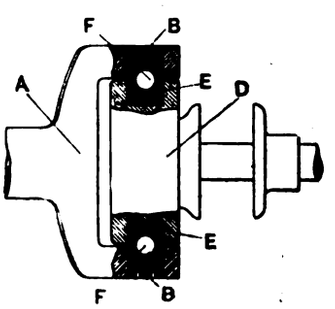
During the past week a series of comparative horsepower tests have been made on the dynamometer at the garage of the Automobile Club of America, gasolene and benzol being used alternately. These have shown a decided gain in favor of the newer fuel. The tests in which the only difference was in the fuel employed, revealed a slight gain in draw bar pull and so in horsepower, in favor of the benzol. By making special adjustments of the carburetter, however, the gain was materially increased. The superlative test—that indicated by the gradometer readings, which take into account the weight of the car as well as the drawbar pull, showed that with gasolene, the car—a Simplex runabout—was capable of climbing an 11.9 per cent. grade. With benzol the indicated grade was 12.1 With the carburetter adjusted especially for the benzol, the maximum theoretical gradient was increased to 12.2 per cent. The draw bar pull in the latter instance was 398 pounds, as against 383 pounds with gasolene.

In addition to an exhaustive series of laboratory trials which have been carried out in England, numerous road trials have been employed to good advantage in demonstrating the economy of the substitute. The most remarkable of these was a 300-mile run which was made by a touring car carrying 4 passengers. The averages at the end of the test, showed a consumption of 7½ gallons per day of 150 miles running, which works out at 20 miles per gallon.

STEERING KNUCKLE SIMPLIFIED

New Principle Applied in a Recent Foreign Design—Adapted to the Lighter Types of Vehicle.

It would be supposed that the design of steering knuckles had been reduced to practically its lowest terms, so long have the two principal types of Elliott and Lemoine knuckle been in use without material alteration. A modification of the former type has recently made its appearance in France, however, which plainly discountenances any such idea. It should be noted, however, that the modification in question appears to be applicable only to the very lightest types of



cars, and for work which is not subject to unusually heavy road stresses.

The design, which has been applied to the Gregoire cars—which are runabouts of the type at present so popular on the Continent—is shown in the accompanying illustration. The principle is merely that of replacing the ordinary through pivot pin by a couple of large balls, set half and half in suitable bearings in the yoke and knuckle, above and below.

The method of construction is plainly apparent from the illustration. The yoke and knuckle ends, are drilled out to take the bearing sockets, B E, which, in turn, are shaped to form the cup retainers for the large diameter balls, F F. The cups, B B, are screwed into place, and after being adjusted to give the proper tension in the bearing, are securely locked in place. The balls perform the double function of bearings and pivots, and it would appear that the relative resistance of the assembly should be comparatively low.

As compared with the more common method of securing the assemblage by means of a pivot pin together with ball bearings of the full type, the system in question possesses the indubitable advantages of simplicity, low cost of manufacture, and natural interchangability. At the same time, the very evident peril resulting from a possible springing of the yoke sufficient to release the balls, and the danger which would arise from the fracture of one of the balls, are points against it, which only a considerable trial in actual service can convincingly overcome.

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WHAT THE CLUBS ARE DOING

Old Ones Electing Officers and New Ones Organizing—Baltimore Develops Novel Interclub Idea.

So efficient were their services last year that the old officers were unanimously re-elected at the annual meeting of the Automobile Club of Hartford, Conn. The president's report showed that during the year the club had increased from 50 to more than 200 members. The officers re-elected were: President, W. F. Fuller; vice-president, C. H. Gillette; secretary, G. K. Dustin; treasurer, C. DeL. Alton, Jr. Chairmen of the various committees were appointed as follows: Membership, C. E. Whiting; contests, Hiram Percy Maxim; rights and privileges, Colonel George Pope; good roads, C. H. Veeder, and sign posts, C. D. Rice.

At its annual meeting last week, held in Lancaster, the Pennsylvania Motor Federation admitted the newly formed clubs of Norristown and Williamsport, making a total of 20 clubs and a total membership of 2,050. Officers were elected as follows: President, Robert P. Hooper, Philadelphia; vice-president, Dr. S. P. Davis, Lancaster; second vice-president, Peter A. Meixel, Wilkes-Barre; secretary-treasurer, Paul C. Wilff, Pittsburg.

Owners in Fall River, Mass., have formed the Fall River Automobile Club. The following officers were elected at the organization meeting: President, Dr. George L. Richards; vice-president, Earl P. Charlton; secretary, Arthur S. Phillips; treasurer, Albert A. Harrison; directors, the officers, H. C. Talbot, George D. Flynn, John R. Hilton, Edmond Cote, Edward B. Remington, Edward J. Jennings, and Robert Marshall.

So many members of the Automobile Club of Maryland enjoy a quiet game of whist when they are not at the steering wheel that the Baltimore Whist Club and the automobile organization have effected an arrangement whereby the members of each organization become members of the other. Each club retains its identity, the arrangement being one merely for mutual social enjoyment.

Watsonville, Cal., now has an automobile club, the Pajaro Valley Automobile Club having been formed last week with these officers: President, Dr. P. K. Watters; vice-president, James Sheehy; treasurer, W. D. Gulick; secretary, W. S. Foltz; directors, R. J. Cox, Carl Christenson, W. J. Russell, C. H. Baker, and P. W. Morse.

The Virginia State Automobile Association was organized last week with the Tidewater Automobile Club of Norfolk and the Automobile Association of Richmond as members. Officers chosen were: President, Joseph E. Willard; vice-president, Abbott Morris; secretary-treasurer, O. M. Alfriend.

The Fairbault Automobile Club has been formed in the Minnesota city of that name with these officers: President, A. Blodgett, Jr.; vice-president, K. D. Chase; secretary-treasurer, W. M. Nutting; governors, Willard McM. Reid, John E. Dobbin, Walter Scott and Dr. C. W. Wilkowske.

The following officers were elected at the annual meeting of the St. Paul (Minn.) Automobile Club: President, Reuben Warner; vice-president, R. M. Neeley; secretary, H. S. Johnson; treasurer, A. Washburn; directors, Oliver Crosby and W. Hurd.

The Arkansas Valley Automobile Club, Pueblo, Col., has elected the following officers for the ensuing club year: President, Lee Graham; secretary-treasurer, Homer E. Brayton; directors, George E. King, Homer E. Brayton, Lee Graham, L. C. Walker and Dr. Crum Epler.

The Roanoke Automobile Club has been formed at Roanoke, Va. It will become a member of the State automobile association which has just been formed. Officers will be elected by the directors, who are as follows: J. H. Marstellar, W. E. Michael, C. M. Armes, J. C. Cassell, Dr. J. D. Kirk, E. M. Funkhouser, Dr. Norris, Judge Waller R. Staples and A. B. Hammond.

With its jurisdiction extending over Wexford, Osceola and Missaukee counties in Michigan the Cadillac Automobile Club has been formed with these officers: President, George Westover; vice-president, Charles E. Haynes; treasurer, Wynter Massey; secretary, Fred A. Anderson.

The New Albany (Ky.) Automobile Club has organized with the following officers: President, John S. McDonald; vice-president, Dr. Charles P. Cook; secretary, Dr. R. S. Rutherford.

The Kenton Automobile Club has been organized at Kenton, Ohio, with twenty charter members. It will become a member of the State association.

GETTING COUNTRY HOUSE IN ORDER

Long Island Automobile Club's Summer Rendezvous "Swept by Ocean Breezes" —Its Location and Attractions.

Preparations for opening the country house of the Long Island Automobile Club are advancing rapidly, and there is reported a large volume of correspondence promising an increase in membership. The house, which is to be held under lease, is on the T. B. Ackerson company's property, known as "Brightwaters," in Bay Shore, Long Island, 39 miles from the present city club house of the L. I. A. C. The house sets back about 300 feet from the Merrick or South Country road. It is 3,900 feet from Great South Bay, where an excellent beach suited for bathing is located. The grounds are large and laid out with shrubbery, shade trees, etc. The house has four large rooms and a spacious hall on the ground floor, besides pantry, kitchen, etc. On the second floor are five large rooms and bath. On the third floor are six rooms with bath and shower. There are spacious piazzas on three sides of the structure.



COUNTRY HOUSE OF LONG ISLAND AUTOMOBILE CLUB

The house is to be conducted as a pleasant rendezvous for members and their families. A competent manager will be in charge; the table will be of the best and a limited number of sleeping rooms will be available for members.

About twenty-five automobile owners of Willimantic, Conn., met in the Board of Trade Rooms on the 8th inst., and organized the Willimantic Automobile Club. The officers elected are: President, Dr. John Weldon; vice-president, J. B. Fullerton; secretary, L. B. Lincoln; treasurer, E. F. Writmore. The board of governors consists of these officers, with D. W. C. Hill, E. P. Chesbro and T. F. Howie.

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G & J TIRE LOSES ON APPEAL.

(Continued from Page 70)

Claim 3 shows that Golding used a sheath and an inner inflatable tube.

This patent was purchased by the appellant soon after it was issued, and owned by it down to the time it expired.

The first Jeffery patent in suit, No. 454,115, is for an improvement in wheel tires, and "is designed to provide improved means for protecting a rubber wheel tire, and is particularly designed and adopted for an inflation tire— that is to say, a tire having a core composed of an elastically expansible tube, which is inflated by air or gas and distended thereby to some extent, the air or gas being under such tension that but for a restraining or enclosing sheath such core would be liable to burst."

The inflated core or elastically expansible tube, encased in a restraining sheath of the Dunlop patent is the same in the Jeffery patent. The improvement of the latter, among other things, over the Dunlop extends to the device for attaching the tire to the rim of the wheel. This, in the description, we find is a "rim" provided with hooked edges. "The hooks may be turned either inward or outward. . . . The tire sheath is provided with correspondingly hooked edges. . . . . Ordinarily the entire sheath will be made of canvas or similar woven fabric comparatively inelastic, and in that event the hooked edges will be stiffened with caoutchouc or India rubber, or they may be vulcanized if the sheath is made of suitable substance to endure the temperature. . . . On some accounts the hooks on the rim are preferably turned outward, chiefly because the center of the body or inflatable core is thereby rendered free from the irregularity which the hooks form when they are turned inward. On the other hand, the liability of the sheath hooks to be pulled out from the rim hooks by the expansive tendency of the core when inflated is somewhat less when the hooks are turned inward; but practically the two methods are about equally desirable." In either case, it should be observed that the hook is open toward the axis, and it is preferably approximately in the direction of a tangent to the inflatable core, so that the expansive tendency of the core will tend to draw the hooks into close engagement.

This improvement in the attachable device, which the patentee has designated "hooked edges," both on the rim and on the tire, is variously stated in claims 1, 2, 3, 4, 5 and 6, which claims the defendant is charged with infringing. They are as follows:

1. "In combination with the rim having recesses open toward the axis of the wheel, the tire-sheath having its edges reversed and engaged in such recesses, and the elastic expansible core between the rim and sheath, substantially as set forth.
2. In combination with the rim having hooked lateral edges, the tire-sheath transversely flexible and having hooked edges which detachably engage the hooked edges of the rim, substantially as set forth.
3. In combination with the flexible tire-sheath having rigid hooked edges, the rim having hooked edges to engage those of the sheath, substantially as set forth.
4. In combination with an inflatable core, the rim in which such core is seated, having its edges reversed to form hooked flanges approximately tangential to the core, and the flexible sheath for such core, having its edges engaged in such hooked flanges substantially as set forth.
5. In combination with the rim having hooked lateral edges, the flexible sheath and rigid strips about which the lateral edges of the sheath are wrapped inserted with the enwrapping-sheath edges within the hooks at the edges of the rim, substantially as set forth.
6. In combination with the rim having hooked lateral edges, the flexible sheath and rigid strips about which the lateral edges of the sheath are wrapped, such strips being folded with the enwrapping sheath to form rigid hooks at the edges of such sheath, such hooks being engaged with the hooks at the edges of the rim, substantially as set forth."

It will be seen that the attachable device in this patent is the "hooked connection" of the sheath and tire edges. The patentee says: "tne rim is provided with hooked edges," and, as said by the court below, these hooks on the rim are "doubled back U shaped, so as to form recesses and permit engagement in such recesses of corresponding hook points on the hooks of the sheath." This hook is open toward the axis and is "preferably approximately in the direction of a tangent to the inflatable core so that the expansible tendency of the core will tend to draw the hooks into close engagement."

The complainant never manufactured tires with the attachable device described in its patent No. 454,115. It was found to be, to say the least, an objectionable means of attachment, and no tires were manufactured as therein described, but the complainant modified its form of attachment by changing the device from a hook, with its opening toward the axis, to a projection of the rim more nearly parallel to the flat surface of the rim, and changed the angle of the hook on the tire more nearly to that of a flange to correspond with the tire. This is the form of the appellee's device, and if the hook shaped attachment described and claimed in appellant's patent No. 454,115 includes the form appellant has used down to the present time, then the appellee has infringed, because the latter is using the same kind of attachable device used by appellant, but the appellee claims both are using the device described in the Golding patent, which has expired and was public property before appellee began to use it.

When Jeffery patented his hooked device set forth in No. 454,115, the field had been well covered, and if he had made his claim sufficiently broad to include "an extension of a rim partly or nearly parallel with the flat portion of the wheel with the flange on the tire to correspond, such as both parties here are using, he would have invaded the domain pre-empted by the Golding patent, of which the "edges of the rim are bent round and brought a short distance toward each other and nearly parallel to the flat surface of the rim, thus forming an inner recess . . . . for holding the projecting flanges of the tire, ... The tire is made to fit the rim rather tight . . . and the flanges spring into the recesses." So that the Jeffery patent can only be sustained by a construction restricting it within the narrow limits of the hooked device which "opens toward the axis," and cannot be extended to a flange "nearly parallel to the flat surface of the rim," and so construed, it is not infringed. It will, therefore, be unnecessary to consider the question of the patentability of Jeffery's improvement.

The conclusion of the court below that the second patent, No. 558,956, was not infringed, we also think is correct, and we cannot do better than to quote the language there used.

"The second patent is No. 558,956, issued April 29, 1896, for a wheel tire, claims five and ten of which are alleged to be infringed. Respondent defends on the ground of non-infringement. We are of the opinion the defense is sustained. The subject matter of this patent, its late date in the art, and the close differentiations required to obtain the narrowly limited claims in question indicate the patent was restricted to a comparatively narrow field of improvement. The specification states: 'This invention relates to tires having inflatable cores; and it consists in the character and construction of the inclosing sheath and the mode of securing the same to the rim.' The character and construction of the proposed sheath are specifically shown. No novelty was suggested in the rim. Its construction for the broader type of the device is: 'The rim is a hollow rim made in familiar manner from tubing . . . having the outer side transversely concave to form a seat for the tire.' A special form is suggested: 'For the purpose of adapting it to receive my improved tire the rim is preferably formed with the peripheral channels A-1 A-1 in the outer or concave wall; but these are not essential to my invention considered in its broadest phase. Their use, when present, will appear from the further description.' The lateral portions of the sheath the patentee made of folded canvas or other web, joined at the folded edges to thread or rubber of sufficient thickness to stand wear and 'sufficient elastic flexibility to adapt it to yield with the core, and having also tensile elasticity. So that the sheath which comprised it as the middle section is transversely extensible to a slight degree.' The purpose of this extensibility was to adapt the sheath for use with either an inflatable or non-extensible core. At the outer end of the folded canvas, hooks or buttons were placed and in the rim at corresponding distances were put engaging eyelet holes or buttons; 'said eyelet holes or button holes being formed in the channels A-1 when the rim is made with such channels.' Then the core is inflated, 'its high tension being exerted in all directions tends to draw the hooks securely into the respective holes in the rim and effectually prevent dislodgemnt.' Of this button connection, which the patentee evidently regarded as the substantial feature, 'in the character and construction of the enclosing sheath and the mode of securing the same to the rim,' he says: 'The use of the buttons or hooks, in lieu of any continuous fastenings, affords the advantage of detachability for short distances without detaching the entire edge or even any large section of the edge, and as compares with familiar advantage that the fastening need not even be relaxed or slackened anywhere except at a point where it is desired to completely detach in order to get access to the core.'

To make the fastening still more secure the patentee suggested an additional element, which it will be noted forms an element in the claims here in controversy. It is thus described: 'It is not a necessity that the lateral pieces C,—that is, the canvas of web sides—terminate at their lines of reinforcement or attachment to the rim, and, on the contrary, one or both of them might be extended farther under the inflatable core, so as to rest between said core and the rim and form a lining for the seat of the core in the rim; and such extension adapts the sheath to be held more firmly in its place by the inflation of the core, and such inflation, holding the inwardly extended edge of the sheath firmly seated between the core and the rim, keeps the beads formed by the core c'—an alternative construction of strengthening cord placed in the folded edges of the web—'in the grooves or channels A-1 of the rim and makes them assist materially in holding the sheath from spreading when the core is inflated.'

The limited side type is described in claim two, which reads as follows: 'The rim and an inflatable core combined with an envelope or sheath for the core parted under the core and fastened to the rim at two peripheral lines, one on each side of the place of parting, and detachable from the rim at one of the said lines of fastening; said sheath having its lateral portions flexible, but not laterally extensible, and its middle portion, including the thread, elastically extensible; substantially as set forth.' And the extended side in claim five, which is for: 'The rim and an inflatable core combined with an envelope comprising a thread of cushioning substance and lateral portions composed of textile fabric which are joined to the rim at two peripheral lines, and extend inwardly from said lines underneath the core between the same and the rim in the plane of the pressure radial with respect to the wheel, which is experienced by the thread and exerted by the inflation of the core; whereby the pressure of the load operates on said inwardly-extending fabric portions of the sheath to hold them seated in the rim; substantially as set forth.' And in claim ten, which is for: 'In combination with the rim having peripheral grooves, in the tire seat, the inflatable core and envelope for the same rifted at the inner side to admit the core to permit the removal, and comprising a thread of cushioning, respectively, with beads adapted to engage the grooves of the rim, and extending inward from said beads to the rift; whereby the inflation of the core presses such inwardly extending marginal portions of the sheath against the rim between the places of the beads; substantially as set forth.'

In the respondent's device, however, the sheath ends with its two peripheral side connections with the rim. No theory or ingenious contention can change that fact, and fact, not theory, is the test of infringement. Accordingly we hold respondent does not infringe."

The decree is affirmed with costs.

Filed, April 1, 1908.

Lubricating After the Winter's Lay-up.

When putting an automobile in service after the winter's "lay up," care must be taken to thoroughly drain the crank case of all the old lubricant. It is well to supplement the draining by the introduction of a liberal amount of kerosene; then run the engine for a minute or two so that the scouring propensities of the kerosene may have the opportunity of acting on all the recesses in the crank case, after which it should be withdrawn and fresh lubricating oil supplied.

The front and rear wheel hubs and axles should be carefully cleaned and repacked with new grease and the steering mechanism treated in the same way. All grease cups should be taken off and cleaned, the verdigris that will be found in these should be cleaned out and new grease substituted for that which has been left in over winter. Gasolene which has remained in the tank where air could reach it should be drained out as it will have deteriorated; it can be used for washing, but will not give good service as a fuel even if mixed with a fresh supply. Finally, the mechanical oiler should be dissected and thoroughly cleaned before using.

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LIGHT ON THE AUTOMOBILE BILL

Terry Answers Some "Whys" Concerning Pending New York Legislation—His Opinion of Proposed New Law.

It was not in exchange for practically unlimited speed that the New York State Automobile Association agreed to the clausein the new automobile bill which provides that the name of convicted offenders should be "posted" in every county of the State. When Charles Thaddeus Terry, the counsel of the association was asked why this clause was inserted he replied:

"It was a necessary concession to some of the legislators who demanded that the bill should provide for imprisonment for the first offense. While this contention was manifestly unfair and would act as an injustice to a man who ordinarily obeyed the speed rules, these legislators maintained that a magistrate had no way of knowing whether the prisoner was a 'first offender' or a twenty-first. When it was shown to them that it was practical and possible for the magistrates throughout the State to have absolute knowledge of all offenders who were brought before them, they readily agreed to waive the imprisonment clause if the provision was inserted for furnishing the police records of all drivers. In my opinion the concession on both sides was for the best interests of the automobilists."

Mr. Terry was then asked what was meant by "reckless driving," for which a penalty is provided, though the bill contains no speed limitations.

"Reckless driving means reckless driving," he responded. "The idea is to do away with the absurdity of the existing law which permits of the same rate of speed in a congested business street that may be maintained on a suburban highway. There are places where, under certain conditions, it would be reckless to exceed a speed of five or six miles an hour, and again one could travel at the rate of 30 miles with perfect safety."

"Is it constitutional to require a man to take out a license to earn his living by manual labor?" asked the interviewer, who remarked the increased registration fee for chauffeurs.

"That involves a point which only the courts can decide," was the reply. "There is a question as to whether the chauffeur is licensed or whether he received a franchise to operate a vehicle on the public highways."

"But in what respect does a chauffeur differ from a coachman?" persisted the interviewer.

"Not in any way; and that question brings up the point that I always have made—that automobile bills constitute class legislation and discrimination that is unjust and illegal. But people are a good deal like horses in regard to automobiles. They must be educated to their use. The automobile bill still is a new thing, and as such it is a subject for general discussion and for legislation. This is not as true of the cities as it is of the country districts, but the rural residents demand certain things of their legislative representatives and these demands must be complied with. I think that the present bill is distinctly more favorable to the automobile interests than is the existing law. When another bill is drawn up it will be more favorable than its predecessor and so it will go until the automobile will become a vehicle in common use and then no legislation discriminating against it will be demanded and it will enjoy the same rights and privileges as are now accorded to horse drawn vehicles."

"Supposing a chauffeur's organization decided to test the constitutionality of the act requiring them to pay for a license or for registration, what do you think would result?"

"I believe it would be a most unwise step. The present amount of the registration fee is nominal and works no hardship on anyone. The question is not now one that is attracting much attention, but a little agitation of it would make it a live issue, with the very probable result that some examination or test would have to be undergone before a certificate would be granted. It is far better not to take up that subject. It will work out satisfactorily in the end.

"There are some features of the bill," said Mr. Terry, in conclusion, "which could be improved, but it is unwise to attempt that at this time. If you begin to alter the bill the legislators simply will throw up their hands in disgust or else will take an active part in the reconstruction; for that reason it is best to let it go as it is, and next year. If occasion demands it, certain alterations can be made in the subdivisions, but, I repeat, the bill as a whole is a decided improvement on the existing law."

Mexico's Annual Cup Race Postponed.

Mexico's annual Jalisco cup race will not take place on April 20th as was planned. At the present time the roads around Guadalajara are not in good condition for racing and the entries came in slower than was expected. Accordingly the race has been postponed until November 5th, when it is planned to considerably increase the scope of the meet.

Plans Decoration Day Hill Climb.

As the hill climbing contest last year was such a success the Cleveland Automobile Club has decided to hold the climb again on May 30th next. The plan followed last year of classifying the cars according to piston displacement will again be used, and there also will be a special final event.

RUNNING ON BLIND SCHEDULE

Quaker City "Roadibility Run" a "Guessability Game"—Johnson the Best Guesser Among 31 Contestants.

Calculating his speed within one-third of a second of the time in his sealed orders, F. M. Johnson, driving a Winton car, was declared the winner of the first annual "roadibility run" of the Quaker City Motor Club from Philadelphia to Cape May, on Saturday last, 11th inst. The distance was 92 miles.

Although it was styled a roadibility run the contest was more of a "guessability" game, as none of the thirty-one contestants knew what they were to do when they started. The game was to see which driver was the best guesser. When the cars left the Walton, in Philadelphia, the drivers were handed sealed envelopes containing the required time in cipher. When all the cars arrived in Cape May the envelopes were opened and the driver who had made the run in the period of time nearest corresponding to that predetermined and kept secret by the contest committee, was awarded the trophy. All the that no sealed times called for a rate greater than the legal limit of twenty miles an hour.

When the envelopes were opened at Cape May, Johnson was found to have guessed nearest to the time marked in his envelope. He covered the distance in 5 hours 54 minutes 18⅗ seconds. The time given his car in which to make the run was 5:54:18. Second prize was given Dr. E. M. Lengle, Matheson, who finished 25 seconds ahead of his sealed schedule time. A. E. Maltby, Winton, was a close third, 26 seconds too soon. These figures all are so well within the speed limit that the performance, which would have been a remarkable one—in the line of guessing—had only one competitor made such an excellent hit, borders somewhat on the wonderful.

The route was from Philadelphia to Camden, Egg Harbor, May's Landing, Esterville, Tuckahoe, Seaville, Cape May Court House and Cape May. The drivers who played the game were:

L. E. French, Pullman; Max La Roche, Pullman; E. C. Benson, Apperson; Charles J. Swain, Apperson; A. M. Benson, Apperson; P. D. Folwell, Packard; J. A. Hudson, Marmon; E. M. Lengle, Matheson; B. F. Pierce, Ford; F.M Johnson, Winton; J. Shelton, National; R. W. Steele, Apperson; W. M. Swain, Apperson; A. E. Maltby, Winton; H. N. Wilkins, Thomas; R. E. Ross, Elmore; O. W. Hoffman, Stearns; T. W. Berger, Oldsmobile; Joe Kier, Thomas; M. B. Reeves, Apperson; F. Geiger, Maxwell; L. C. Simpson, White; J. H. Schenck, Winton; J. N. Wilkins, Ford, and Frank Yerger, Studebaker.

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BAY STATE "SQUEEZER" STRANGLED

Adverse Committee Report on Proposed Additional Taxation of Automobiles—Important Features in New Bills.

Something has happened in the Commonwealth of Massachusetts, since the last issue of the Motor World, that has switched off the track the "squeezer" bill that was to carry out Governor Guild's proposal to get more money from the automobilists. Indications of a week ago pointed to the strong probability of a measure being reported under which new taxation would be imposed on automobiles, with a graduation in the size of the fees to be exacted for registration. The Committee on Roads and Bridges, however, has given more mature consideration to the question with the result that it reported "no legislation necesary" on that portion of the Governor's inaugural address wherein the suggestion for increased taxation was made.

On the other hand the committee has yielded to the demand of the anti-automobile element on the island of Nantucket and has reported a bill that is designed to give to the selectmen of the town of Nantucket the power to exclude automobiles from the island between June 15 and September 15 of each year. In order to get an idea of the actual situation there the members of the committee visited the island early during the current month. The trip of 30 miles across the turbulent waters of Nantucket Sound was too much for the stomachs of the solons, and it is possible that one result of their seasickness was that they couldn't see why automobilists should want to go to Nantucket anyway.

The most important bill reported by the committee is one incorporating many of the suggestions of the Highway Commission and the Safe Roads Automobile Association. In this bill there appears a new section designed to bring non-resident automobilists more closely under the Massachusetts laws. The present law permits non-residents, whose cars are properly registered in their home States, to use them in Massachusetts for a period of seven days without a Massachusetts registration. As a matter of fact, it is said that many non-residents have used their cars there all summer, going out of the State at intervals so as seemingly to comply with the law. If the drivers or owners of these cars happen to be convicted of an offense against the automobile laws of Massachusetts they are brought into court and fined. That is as far as the law can go, for having no Masaschusetts registration they cannot be penalized by the Highway Commission.

The new bill as reported adds to the section of the law which permits non-residents to use their cars in the State for seven days the following sentence: "But if any such non-resident be convicted of violating any provision of the laws of this Commonwealth relating to automobiles and motorcycles and to the operators thereof, by any court or trial justice, whether or not he appeals, he shall thereafter be subject to and required to comply with all the provisions of this act relating to registration of motor vehicles and the licensing of operators thereof." In other words, if a driver of a non-resident automobile is convicted in a police or district court of overspeeding he must forthwith take out a Massachusetts license and registration.

Under advice from the Attorney General's office the committee changed the provision of the bill relating to running away after an accident. In the original draft this clause read: "or goes away without stopping and making himself known after causing any accident to any person, or any serious accident to any property, unless he can prove a justifiable excuse." The clause now reads: "or who without a reasonable excuse therefor goes away without stopping and making himself known after causing injury to any person or property." The change is obviously to the advantage of the automobilist, for he can prove a "reasonable" excuse, perhaps easier than he can a "justifiable" excuse. The penalty for running away is fine or imprisonment and the loss of license.

A new section of the bill provides that the Highway Commission may issue certificates and licenses without charge to members of the foreign diplomatic corps; may charge an additional fee of two dollars for examination of an applicant for a license, and may charge fifty cents each for duplicates of certificates or licenses. The bill also appropriates $3,000 to help defray the expenses of the inspectors who are to be appointed by the Commission to investigate accidents.

Testing Chicago's Wheel Tax Ordinance.

Chicago's wheel tax ordinance, which was passed by the city council February 3, is now ready to be put to the test of constitutionality in the Supreme Court. Judge Carpenter of the Circuit Court, handed down a decision on Friday of last week, holding that automobiles and vehicles used for recreation and purposes of pleasure may not be taxed under the ordinance. The finding was on a bill filed by Charles C. Harder and his son Charles C. Harder, Jr., asking an injunction to prevent the collection of the tax on pleasure vehicles belonging to them. Several weeks ago the Harder Fire Proof Warehouse Van Co. filed an injunction petition to prevent the collection of the tax on vehicles used for mercantile purposes. To this the city filed a demurrer which was sustained, the complainant taking an appeal on the ground of the alleged unconstitutionality of the statute and ordinance providing for the tax. The more recent action was intended to broaden the scope of the original motion.

FEES DETERMINED BY HORSEPOWER

Rhode Island's New Automobile Bill Provides for Graded Taxation—Also Limits Speed to Twenty Miles.

As the result of a number of meetings of the judiciary committee of the Rhode Island Assembly, a new automobile bill has been framed for submission to the House. In a general way it conforms more closely to the measure introduced by Representative Phillips of Coventry than to the bill drawn in the interest of the Rhode Island Automobile Club, or the one introduced by Representative Olney Arnold, of Providence. The Phillips bill provided for placing the control of automobiles in the hands of the board of public roads instead of the Secretary of State, as at present. This provision was opposed by Col. Frank W. Tillinghast, of the Automobile club's special legal committee, at a hearing given in February and reported in the Motor World at that time. It appears, however, in the new bill, which also follows the Phillips measure in dividing motor vehicles into three classes for licensing purposes. The division is made according to rated horsepower and fixes the amount of license fees as follows: For vehicles of 10 horsepower and under, $5; for vehicles between 10 and 35 horsepower, $10, and for vehicles of 25 horsepower and over, $25.

The bill limits the speed of automobiles to 20 miles an hour, providing that in no event shall a person operate or cause to be operated a motor vehicle at a greater rate of speed. In a public highway where the territory is closely built up, the speed shall not be greater than one mile in six minutes. Elsewhere in a city or village the speed may not be greater than a mile in four minutes, or elsewhere outside of a city or village a mile in three minutes.

The bill forbids the operation of a motor vehicle on the public highway when the driver is intoxicated, or is engaging in a race, or running his machine as the result of a wager.

New Bill Ignores Police Lieutenants.

Under the proposed automobile law now pending in the New York State legislature, lieutenants of police will not have authority to accept bail from persons arrested for violating the law. In the section relating to bail, etc., it is provided that any captain, sergeant of police or acting captain or sergeant of police may accept bail. While undoubtedly it is intended that the power of those officers of the police force of New York City, who formerly were ranked as sergeants, is to continue, yet the wording of the law now gives this authority to what were formerly roundsmen, as they are now distinguished as sergeants, and their superiors as lieutenants.

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REMEDY FOR NOISE IN CHAIN DRIVE

Good Results to be Secured by Thorough Cleaning and Lubrication—Effective Methods for the Process.

To give proper care to driving chains usually entails the dirtiest kind of dirty work. One reason that is often advanced to account for a preference for shaft driven cars, over those where the power is transmitted by chains, is that the former are more quiet. But this explanation is not founded on fact. While it is true that the shaft driven car usually is the more quiet of the two, yet invariably the noise that is made by the chains can be eliminated if proper care is given to them; but because this care means that one must get right into oil, grease, and dirt, it is seldom that the man who looks after the car will do it unless he absolutely is required to do so.

When a chain rattles or squeaks it is the outward sign that it needs oil, and generally the oil is applied to the outside of the links where, though temporary relief from the squeaking is obtained, it serves mainly to collect dirt, and shortly the condition of the chain becomes worse than it was before the application.

If a chain needs oil it should be given oil where it requires it and that is on the inside of the rollers. To accomplish this thoroughly, yet in the simplest way, necessitates the installation of a simple apparatus and then a few minutes of intelligent work. There should be a stove, or heat of some sort over which is placed a pot of very heavy oil, or mutton tallow, or a thick grease that will become fluent when heated. Directly above this in the ceiling, should be a pulley through which a rope with a hook in the end of it should be passed.

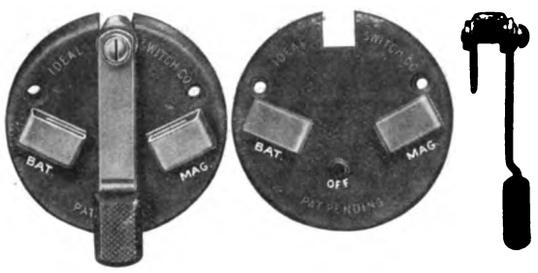
The chains should be removed from the car and thoroughly cleaned in gasolene, kerosene, or in a solution of bi-carbonate of soda, after which they should be soaked for several hours in the hot oil or grease that is over the fire. The immersion in this lubricant should be sufficiently long to permit of every part of the chain becoming thoroughly coated. When this has been accomplished, the chains should be drawn out of the oil by means of hook and rope and should be suspended above the pot of oil and allowed to drip into it. When the chains have become cold it will be found that a film of the lubricant has coated the inside of links and rollers; the oil remaining on the outside should be thoroughly removed.

In replacing the chains on the machine, if a proper adjustment is made, they will run without noise and the satisfaction to be gained from a quiet running car well repays for the trouble of giving the chains a proper treatment. A chain cannot be thoroughly lubricated by the introduction of oil from the outside; it is the inside of the links that must be reached and this can only be done by soaking in a lubricant that is hot. Melted tallow is the best thing, heavy grease that will run freely when hot is the next best, and if neither of these can be obtained, a heavy oil will furnish good results under this method of cleaning and lubricating.

Battery Switch with Novel Features.

One of the new accessories which is likely to find favor with automobilists is the Ideal automobile switch made by the Ideal Switch Co., Inc., of Plainville, Conn.

In addition to furnishing a large contact surface between the blade and the terminals when the circuit is closed, the switch contains other features which are more or less



novel. When the circuit is open the blade readily may be removed. When removed, it practically is impossible to obtain a contact through the switch, as the circuit terminals are on the back of the switch and so arranged that they cannot be brought in contact save through the medium of the blade, which is of an unusual and irregular shape.

When the circuit is closed there is no possibility of the blade being removed from the switch, as the peculiar form of the contact terminals cause them to serve as a locking device which hold the blade in position. Another feature of the switch is that the neutral point, a copper stud whichi s shown in one portion of the illustration and is marked "off" may be used as a contact point when connected with the ground wire of a high tension magneto.

The switch is strongly made. The body or base is of hard rubber, the contacts are of heavy copper, plain or nickeled, as one may prefer.

Prolonging the life of Horn Bulbs.

Horn bulbs which develop a tendency to crack and break just inside the raised ring which is invariably placed at the "business" end, may be repaired in a serviceable though unhandsome manner, by paring down the ridge carefully with a sharp knife and then cementing on a circular patch of thin rubber, such as may be obtained from an old inner tube. Properly done, such a repair will prolong the life of the bulb to a surprising extent without in the least impairing its usefulness, though its beauty may be sadly marred.

CLEAN STORAGE FOR LUBRICANTS

Its Necessity Illustrated by a Costly Experience—New Car Crippled by Trash Dropped into the Oil.

Cans containing oil or grease always should be kept covered. An uncovered can of heavy transmission oil recently was the means of putting the owner of an automobile to several hundred dollars' expense, which easily could have been avoided if the receptacle containing the oil had been properly protected against the introduction of a foreign substance.

The car was a new one and having been used for a month or two the chauffeur decided to replenish the lubricant in the transmission case. To accomplish this a plate was removed from the top of the case and heavy oil was poured in. A day or two later at a time when the car was being driven rapidly through the street there was a sudden crash somewhere in the car's interior mechanism, followed by an even more sudden stoppage of the automobile. Without attempting to proceed further under his own power the chauffeur sent for horses and was towed to the garage. It quickly was found that the trouble was in the transmission case and an inspection of this part disclosed a serious state of destruction; two of the gears were entirely destroyed and the cause of the mishap was found to be a steel washer which was so different from anything that was used in the construction of the car as to identify it as being something that must have gotten into the transmission case when the lubricant was poured in. The can containing the oil was then examined and in the bottom of it were found two more scraps of iron which, through carelessness, accident, or design, had found their way there.

While it is not always practical to strain the lubricant while introducing it into the working parts of a motor car, it is possible to use sufficient precaution to prevent foreign substances as large as a washer or nut from being carried in with it, and owners should insist on precautions, the neglect of which may involve large outlay.

Replacing Union on Gravity Tank.

When it is necessary to replace the union connecting the outlet of a gravity fuel tank with the stop cock, it is best to remove the tank from the car and invert it. Where this is not convenient, however, it is possible to accomplish the desired result without even going to the trouble of emptying the tank, by merely stopping up the air vent in the filling plug. This will check the flow very materially, and by working quickly it is possible to effect the connection without much loss either of time or gasolene.

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The Week's Patents.

883,255. Power Lever. William W. Sutherland, Griswold, Iowa. Filed Aug. 26, 1907. Serial No. 390,215.

1. The combination with a frame, of a driving shaft provided with a crank arm, a pedal shaft having a similar crank arm, a pitman connecting the crank arms, levers pivotally connected with the pitman on opposite sides of one of the crank arms, and links pivotally connecting the levers with the frame.

878,564. Wheel for Vehicles. Thomas W. Rieder, Pittsburg, Pa. Filed Feb. 28, 1907. Serial No. 359,841.

1. A vehicle wheel consisting of a hub, radially disposed spokes carried thereby, an inner rim carried by said spokes, a felly surrounding said rim, spring fastening plates connecting with said felly and said rim, pins loosely mounted in said plates , coiled springs interposed between said plates, and having their two end convolutions bent to form eyelets to engage the ends of said pins upon each side of said wheel.

878,706. Carburetter. Lars Anderson, New York, N. Y., assignor to Triplex Gas Engine Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 22, 1906. Serial No. 344,536.

1. In a device of the character described, a chamber in the form of a hollow sphere or globe, and having an unobstructed interior, a pipe for delivery thereinto of the mixture of oil and air, a delivery pipe communicating radially with said chamber, a spherical or globular inclosing casing for said chamber forming a jacket therefor, an exhaust pipe connection delivering from the engine to said jacket, and an exhaust connection to the outer air delivering from said jacket.

878,708. Heated Steering Wheel. Charles Berg, New York, N. Y. Filed March 25, 1907. Serial No. 364,338.

1. A steering wheel provided with a hollow rim, an insulating core therein, a heating coil on said core, another heating coil enveloping the first named coil, insulations for keeping the coils from contact with each other and with the wheel rim, and means whereby current may be suppjied to both coils or one of said coils.

878,713. Vehicle Wheel. Nathaniel Dryden, Los Angeles, Cal. Filed Nov. 19, 1906. Serial No. 344,050.

1. An interacting vehicle wheel, comprising a hub member having a resiliently supported felly and annular guide plates secured thereto, and an outer member comprising two annular rigid members connected together by spokes, and having a plurality of plates secured thereto so as to form annular grooves, said grooves adapted to engage the guide plates of the hub member, whereby the two members are held in engagement.

878,714. Spring Wheel. Harris T. Dunbar, Buffalo, N. Y. Filed Feb. 11, 1907. Serial No. 356,724.

1. A spring wheel comprising a hub, a rim, yielding means operatingto hold the rim concentric to said hub, and a frictional connection between said hub and rim, independent of said yielding means, substantially as set forth.

878,747. Starting Device for Explosion Engines with four Cylinders. Hippilyt Saurer, Arbon, Switzerland. Filed October 6, 1906. Serial No. 337,707.

1. In a four-stroke cycle explosion engine with four cylinders, the combination with four spring-pressed inlet valves in the four cylinders, of a connection on the four cylinders above said four spring pressed inlet valves and comprising a cylindrical bore in its middle with four openings to the spring pressed inlet valves, and a roto turn in the cylindrical bore of said connection and provided with two apertures and so driven as to make one revolution on every two revolutions of the crank shaft, its two apertures being so disposed as to severally and each supply compressed air or gas through the respective channel to either of two cylinders during that stroke of its piston, during which in the normal work of the engine the expansion of the exploded gases would take place.

878,954. Driving Mechanism for Automobiles, etc. Henry K. Holsman, Chicago, Ill. Filed April 20, 1907. Serial No. 369,198.

1. In a device of the class described, the combination with the driving shaft and the pair of discs with their driving surfaces facing each other secured thereto of the driven shaft and the driven disc carried thereby located between the driving discs, and means for translating said driving shaft to engage one or the other of the driving discs with the driven disc.

878,948. Carriage Hood. Traugott Golde, Gera-Reuss, Germany. Filed Feb. 11, 1907. Serial No. 356,909.

1. A folding top comprising main hoops and auxiliary hoops pivoted thereto, and outrigger hoops one of which is pivoted at its ends to the forward main hoop and has break joints in its side arms, supporting arms pivoted to said forward main hoop, and at their outer ends having the other of said outrigger hoops pivoted thereto, and being pivotally conected between their ends to the first mentioned outrigger hoop.

878,953. Motive Power. Henry K. Hess, Philadelphia, Pa. Filed March 23, 1903. Serial No. 149,118.

1. A steam engine and a boiler connected thereto in combination with a gas engine, means to conduct the exhaust from the gas engine to the boiler to generate steam therein, a normally closed valve in the connection between the boiler and steam engine, and means actuated by the steam pressure for opening said valve.

878,955. Driving Mechanism for Automobiles. Henry K. Holsman, Chicago, Ill. Filed April 20, 1907. Serial No. 369,199.

1. In a device of the class described, the combination with a traction wheel having a tread surface and carrying a tire rim, of a driving disc having a deep groove whose sides set at an acute angle to each other are adapted to engage the outer edges of the rim, which edges have a corresponding angle, and means for rotating the disc.

879,027. Automobile. Louis M. G. Delaunay-Belleville, Paris, France, assignor to Société Anonyme des Automobiles Delaunay-Belleville, St. Denis, Seine, France, a Corporation of France. Filed Sept. 30, 1907. Serial No. 395,206.

A device of the class described comprising a tube forming a forward extension of the differential box and surrounding the cardan shaft, but not touching it, the front part of this tube ending in a socket and being supported in a bearing arranged at the extremity of a single connecting rod, the other extremity of which is able to rock around a ball fixed rigidly to the chassis.

879,045. Fluid Clutch. William W. Henderson, Washington, D. C., assignor of one-half to Hugh A. Thrift and William Hinds, Washington, D. C. Filed June 11, 1907. Serial No. 378,415.

1. In a fluid clutch, the combination of a driving member, a driven member, a casing upon one of said members, having therein a fluid chamber and a passage in the casing connecting opposite ends of said chamber, a rolling piston carried upon the other member, and adapted to travel in said chamber and force fiuid through said passage when it is open, and a valve in said passage.

879,086. Variable Speed Gearing. Bassett M. Coffee, Richmond, Va., assignor of one-fourth to William J. Whitehurst, Richmond, Va. Filed March 7, 1905. Serial No. 248,860.

1. In a variable speed gear, a driving shaft; a driving pinion fast thereon, a pair of pinions loosely mounted on the shaft for independent movement, a brake drum having an internal rack, a brake shoe for the drum, independent sets of planetary gears that connect the brake drum with both of the loosely mounted pinions and means for locking either of the said loose pinions from revolving, and other planetary gears connecting the first mentioned sets of planetary gears with the driving pinion.

879,100. Friction Clutch. Charles R. Greuter, Holyoke, Mass., assignor to Matheson Motor Car Company, Wilkes-Barre, Pa., a Corporation. Filed Feb. 7, 1906. Serial No. 299,970.

1. In a clutch, the combination with the wheel member, of a fixed clutch shoe consisting of a ring bolted to the wheel member and seated against its rim portion, a spring released movable clutch shoe loosely supported at one side of the fixed shoe, a rotatable hub arranged at one side of the wheel member and carrying a friction disc located between the two shoes, and a plurality of suitably actuated rocker cams supported at one side of the movable shoe and operating against the same.

879,160. Mounting of Road Wheels for Vehicles. Charles W. Fulton, Paisley, Scotland. Filed May 15, 1905. Serial No. 360,572.

1. In a mounting or suspension for vehicle wheels the combination with a short axle for the wheel and a brocket in which the wheel axle can move vertically, of a cross axle carrying the brackets and nonsynchronous springs located between the wheel axle and the bracket and between the bracket and its supporting cross axle to which latter one of the springs is connected and means permitting the wheel axle to move laterally relatively to the vehicle.

879,186. Cushion Tire Wheel. Charles A. Marien, St. Louis, Mo. Filed Feb. 21, 1907. Serial No. 368,535.

1. In avehicle wheel, the combination with a rim, of a tire of resilient material seated thereon, crossbars passing through said tire, retaining members of rigid material engaging the ends of said rods but allowing inward radial movement thereof when the tire is compressed, and retaining plates engaging the outer edges of said members whereby the outward radial movement of said rods is limited.

879,195. Wind Shield or Weather Screen for Motor and Similar Vehicles. Henri S. Samuel, Perth, Scotland. Filed Dec. 21, 1905. Serial No. 292,781.

1. A wind guard for vehicles consisting

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of a lower rigid flat portion permanently secured to the vehicle and extending transversely thereof and inclined rearwardly in proximity to the steering wheel or handle and an upper portion extending upwardly from the lower portion in front of the driver's face.

879,199. Pneumatic Tire. Baldwin F. Schirmer, Indianapolis, Ind. Filed April 15, 1907. Serial No. 368,221.

1. The combination, with a rim and tire casing, of a ring upon said rim, a series of cylinders set therein at frequent intervals, a common chamber inclosed in said ring for all said cylinders and communicating with the inner ends of said cylinders, a piston in each cylinder, a stem and broadened shoe therefor, a casing against which said shoes are adapted to exert pressure, an annular chember in said ring, communicating with the outer ends of said cylinders, and having an inlet valve, passages leading from the outer ends of said cylinders to the said aforesaid common chambers and valves in said passages.

879,205. Metal Vehicle Body. Hinsdale Smith and Arthur P. Smith, Springfield, Mass. Filed May 8, 1907. Serial No. 372,631.

1. In an improvement of the class described in combination with the side plates of a vehicle body and the doorsill, a sill facing plate extending from the forward seat to the forward upper edge of the rear seat.

879,312. Elastic Vehicle Tire. Edward L. Perry, Paterson, N. J. Filed June 15, 1907. Serial No. 379,241.

1. An elastic vehicle tire having a plurality of transverse perforations or openings therethrough, and plugs having air vents and adapted to engage said perforations or openings, substantially and for the purpose set forth.

879,349. Strain Distributing Device for Vehicles. James Worthington, Manitowoc, Wis. Filed April 24, 1907. Serial No. 369,924.

1. In a vehicle, the combination of the axle bars and a spring supported platform, of a set of intermeshing gear wheels connected with the central portion of the platform, and strut rods each pivotally connected with one of the gears at a point vertically offset from the axis of gear rotation, said gears being arranged to distribute strains from any one of the strut rods to each of the others, some of said strut rods being connected with the platform.

879,367. Friction Transmission Mechanism for Power Driven Vehicles. James H. Cook, Homer, Mich. Filed April 4, 1907. Serial No. 366,450.

1. Friction transmission mechanism comprising a friction disc constructed in two sections, each of said sections being movable independently of the other at right angles to its plane of rotation.

879,380. Multiple Carburetter. Charles R. Greuter, Wilkes-Barre, Pa. Filed Feb. 25, 1907. Serial No. 359,279.

1. A carburetter comprising a plurality of vaporizers, a single throttle common to the several vaporizers, and separate cut-offs for the oil feed for certain of the vaporizers, said cut-offs being operated by the throttle.

879,414. Steering Gear for Vehicles. David E. Ross, Brookston, Ind., assignor to The Ross Gear and Tool Company, La Fayette, Ind., a Corporation of Indiana. Filed May 10, 1907. Serial No. 372,854.

1. In a vehicle, ground wheels, a rack, a pinion meshing with said rack for moving the same longitudinally, means for turning said rack as it is thus moved, and connections between said rack and said ground wheels whereby the turning movement imparted to the rack turns the wheels for steering the vehicle.

879,428. Cooling Device for Engines. George Wolke, Jacksonville, Ill., assignor of one-fourth to E. P. Kirby, and one-fourth to William K. McLaughlin, Jacksonville, Ill. Filed Aug. 9, 1906. Serial No. 329,919.

1. An internal combustion motor comprising a cylinder, a crank chamber communicating therewith, a piston arranged in the cylinder, a crank shaft housed in the chamber and connected for operation by the piston, a fluid receiving chamber communicating with the crank chamber, means for controlling the admission of fluid from the crank chamber to the fluid receiving chamber, jet tubes opening into and projecting from the latter, and perforated fluid distributing tubes sustained around the cylinder and open ends to receive the respective jet tubes, the open ends of the distributing tubes being of greater internal diameter than the external diameter of the jet tubes.

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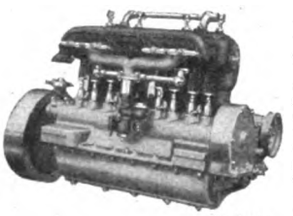
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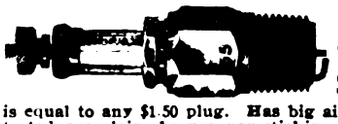
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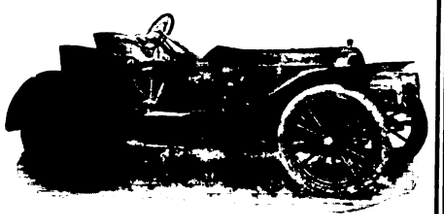


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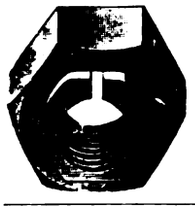
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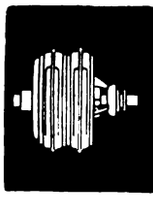
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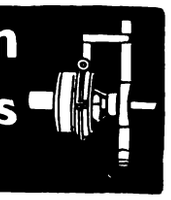
Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

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COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn



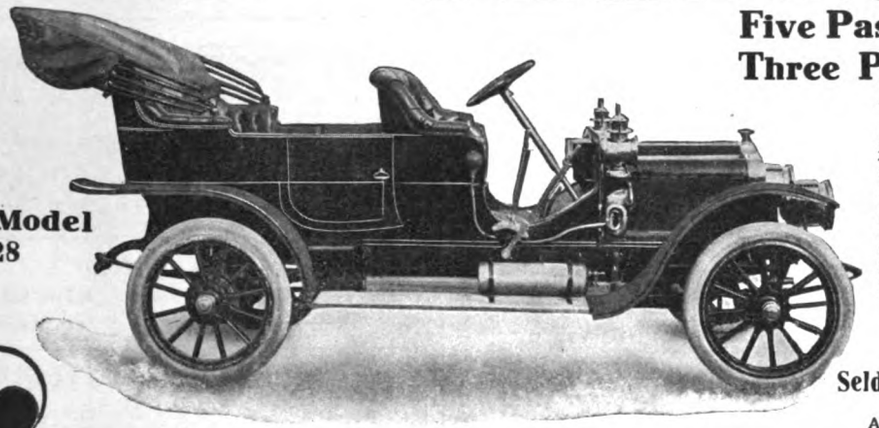
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Model 28

Five Passenger Touring Car $2000
Three Passenger Runabout $2000

AN ATTRACTIVE CAR AT AN ATTRACTIVE PRICE

SPECIFICATIONS—Engine, 4 cylinders, 4¼x4½, 28-30 brake horsepower. Transmission, 3 speeds forward and reverse, selective, Timken bearings. Wheel base, 109 inches; tread, standard; clutch, cone leather. Body, sheet metal, straight line type, roomy and comfortable. Tires, 32x3½, quick detachable; make optional. Frame, pressed steel, 4¾ inches deep. Front axle, single I-beam drop forging, ball bearings. Rear axle, bevel gear drive, enclosed type, roller bearings. Ignition, synchronized jump spark. Weight, empty, 2,200 lbs. (actual, not catalogue).

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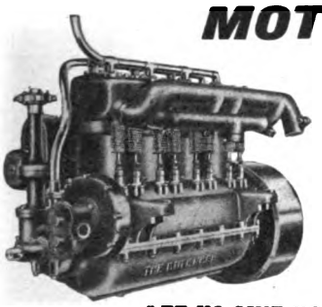
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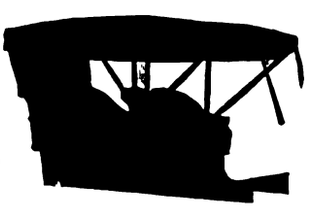
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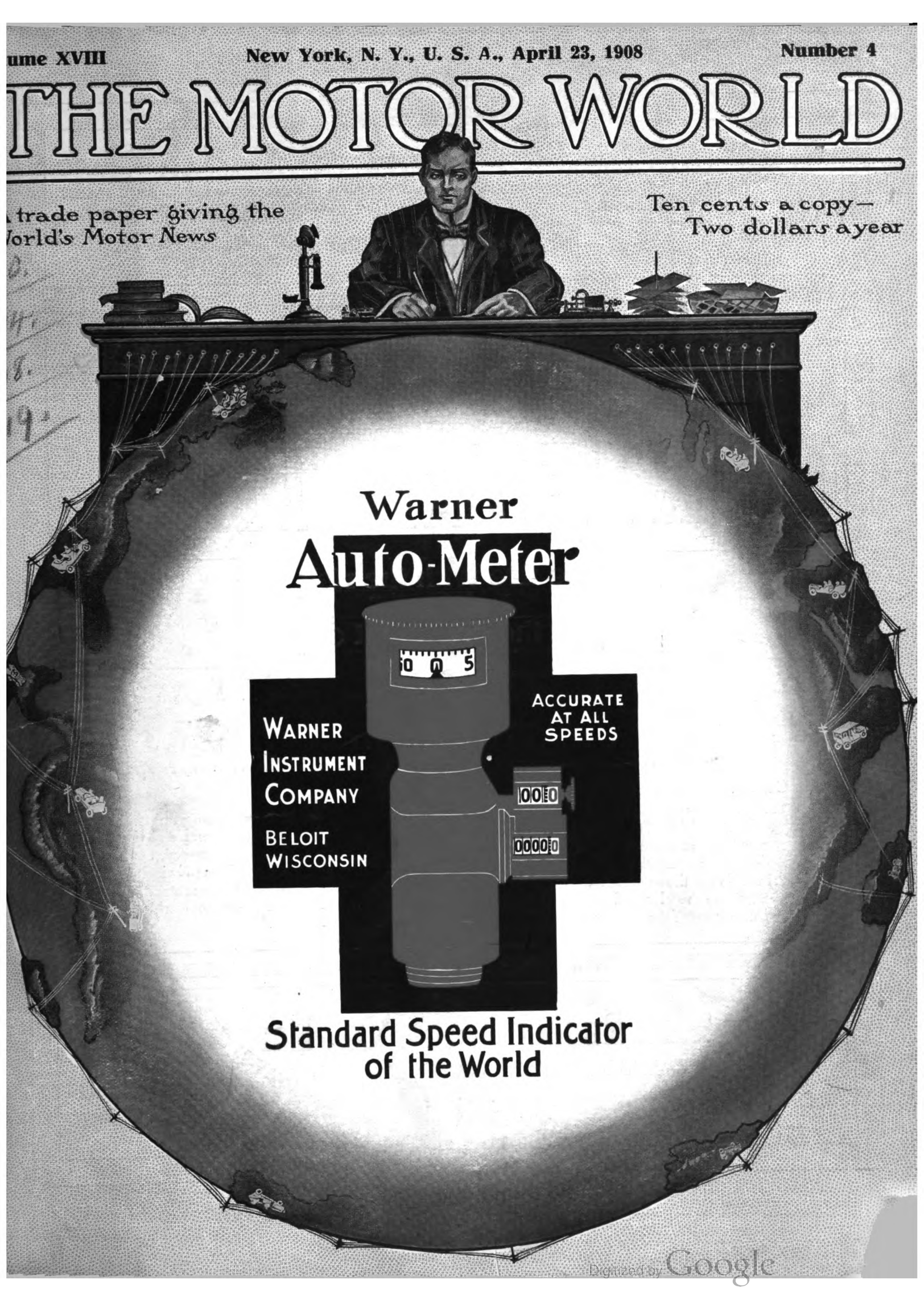
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ume XVIII New York, N. Y., U. S. A., April 23, 1908 Number 4

THE MOTOR WORLD

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Every mail brings to us words of praise of the endurance qualities of

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"The tire with the risk and the doubt left out"



¶ A very interesting letter has been recived by us from a Mexican customer praising our product which was fitted to the winning car in a race recently held there.

¶ The contest was for a silver cup offered by the Daily Record of Mexico City to the touring car which should make the quickest run from Mexico to Guernavaca and return, a distance of 135 kilo. over a stony and sandy road.

¶ Mr. Chas. L. Seeger, our customer, writes:

"At the last moment we decided to try for the cup with a 40 H. P. Locomobile, equipped with Hartford-Dunlop tires, Midgley Treads on the rear wheels. The tires had already seen considerable service, and having only one spare Dunlop tire in the size required, we carried it along in case of emergency, but it was not needed. We made the run in three hours and twenty minutes and won the cup without having to make any changes in the tire whatsoever. We are satisfied that there is no other tire made that will stand rougher usage better than the Hartford and say this unconditionally, as we believe, in no part of the world do tires receive rougher usage than in our country."

The Hartford Rubber Works Co., Hartford, Conn.

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The Franklin Type G Touring Car at $1,850, and the G runabout at $1,750 are better suited to family and business use than any large, heavy automobile, besides being far more economical.

Type G is as high grade as the Franklin six-cylinder automobiles that sell for $4,000. Type G has the same materials and workmanship; only it is smaller. It is the proper size for family and business use; it is large enough for touring; but it costs less to buy and to run.

Type G is a standard automobile in all respects. Over 1,900 are in use. Its light-weight (1,600 pounds), and small engine (16 horsepower) make the up-keep and running expense very low.

We know of a business man who has run a 1907 G touring car for over seven months at a total cost of $8.53 per month. This cost includes $3 a month for barn rent, all repair expense, oil, gasoline, washing, etc. Large heavy automobiles cost a good deal more than that for gasoline alone.

Many users of large automobiles would get more mileage and more comfort with this Type G. Almost invariably a man who owns a big machine and a small one, uses the small one the most.

Type G is far cheaper to own than a horse. Its service is unlimited.

Like all the Franklin automobiles, Type G has four full-elliptic springs and a laminated wood frame. This construction and light-weight gives freedom from jolting, and perfect riding qualities, so that Type G can be driven easily, safely and fast over all roads. It will go farther in a day over average American roads than a high-power, hard-riding heavy machine. You can test this for yourself.

Another thing: Type G doesn't wear itself out. Depreciation is slight.

There is no other automobile on the market like the Franklin G. Some may be cheaper to buy, but they are heavier, which makes the owning cost more than offset the price.

There is more satisfactory service—more life and miles in type G than in any automobile ever built for the money.

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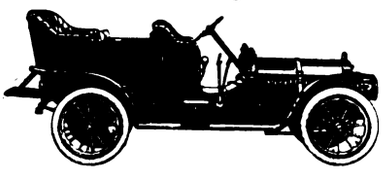
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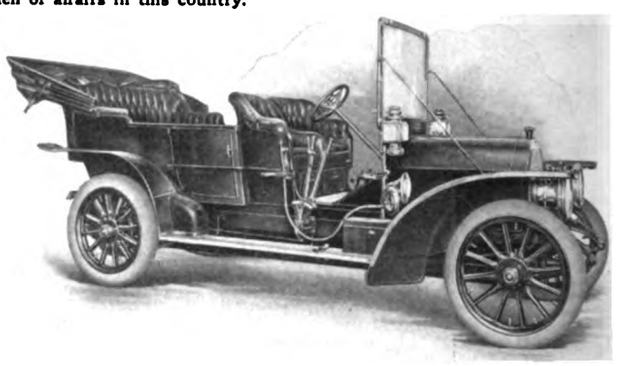
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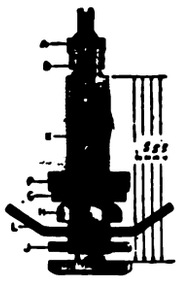
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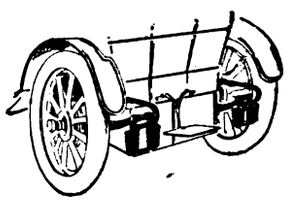


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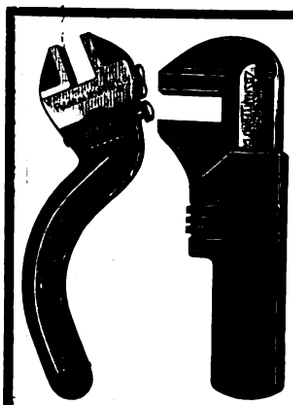
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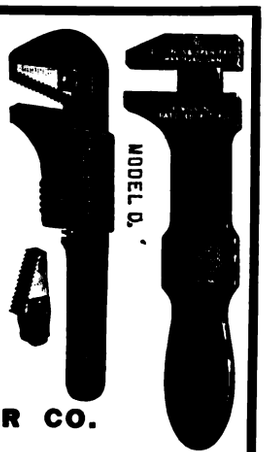
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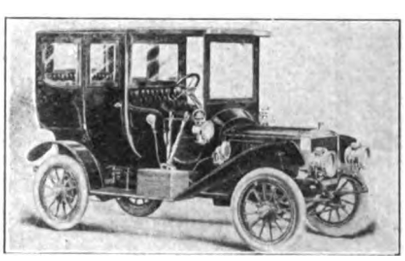
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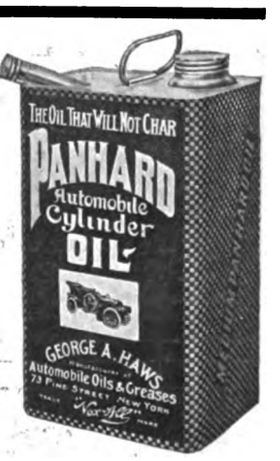
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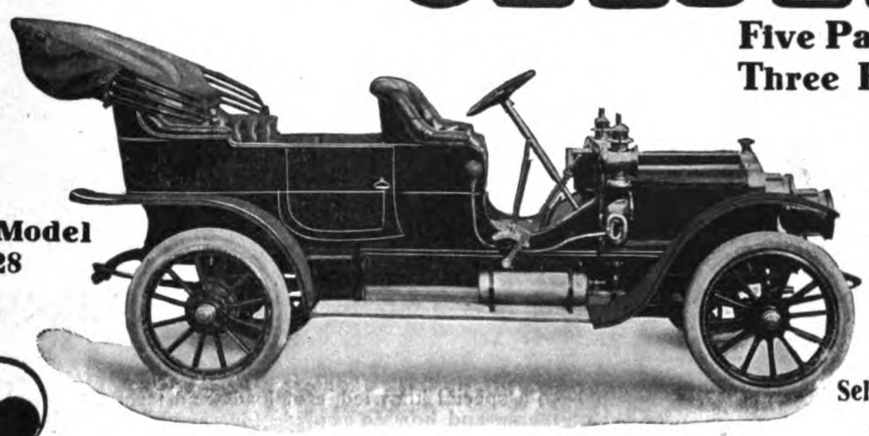
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Three Passenger Runabout $2000

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You will never know its merits until you do. Why be **bothered with** a smeared machine, when you can procure a lubricant that **will NOT** leak out, and lasts LONGER than any other? Those who are on the alert for the BEST, usually get it!

Put up in 5, 10, 25 and 50 lb. cans.

Manufactured only by the
Perfection Grease Company, **South Bend, In**

Empire Tires
WEAR LONGEST

EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 20 La Salle St.; Atlanta, Ga, Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo.; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

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If it was necessary to pay more for

MORGAN & WRIGHT TIRES

than for other kinds,

there might be a reason why some motorists (particularly those who are buying their first car) would accept other kinds in order to save first cost; but it is an entirely different proposition when a motorist can get the kind of service Morgan & Wright tires are known to give at the price of other brands.

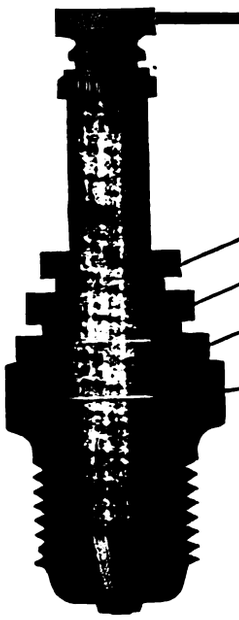
John H. Gibson, Assistant Manager Gibson Coal Mining Co., Des Moines, has "gone thru the mill" in tire experience, but has discovered (as a good many motorists are discovering) that tires are not all alike. He says, under date of February 7:—

"It is not very often that the owner of an automobile has anything complimentary to say about tires. I have one of your tires on my Thomas Flyer which has given 7,400 miles of service, with no repairs whatever, certainly an unexpected and very flattering result. I think, in justice to the makers of such a tire, that congratulations are due you."

You can have the same kind of service by using the same kind of tires, and without extra cost.

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere



Wico Plugs are Guaranteed

Guaranteed in the fullest sense of the word, for one year—against imperfections in material or workmanship, against porcelain breakage by heat.

Wico Spark Plugs may be instantly adjusted to suit any requirement. It is possible to set the spark gap to a **known distance** down to 1-1000 part of an inch. This special and exclusive feature has made the **Wico the** perfect spark plug. **Price, $1.00 each.** Mission oak brass trimmed case free with orders for five or seven plugs.

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Baltimore Office: 609 Continental Trust Building.

Exclusive Features of Solar Lamps

(1) The Internal Method of Screw Assembling

¶ All Solar Headlights when assembled are riveted by internal screws. This exclusive feature produces a perfectly smooth exterior surface, permitting ease of cleaning. This is a very important feature for the owner to consider when purchasing a motor lamp.

¶ This important detail and all others explained fully in our new 1908 catalog. Write for copy.



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Two Factories

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436 Eleventh Ave., NEW YORK

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The Matter of Safety

is often overlooked by automobile designers and results are often serious, sometimes disastrous. In the



Automatic Spark Retarder

Rambler

this is considered an important detail and safety of operator and car is given equal consideration.

A leading feature is the automatic spark retarder, by means of which engaging the starting crank positively retards the spark, thus removing all danger from premature ignition.

As to safety of the car, there is no greater source of trouble than loosened bolts or nuts.

In the Rambler this is prevented by the use of Rambler lock nuts that positively cannot come loose, or by castellated nuts locked in place by cotter pins.

These are in themselves but small things, but it is such attention to little things that makes the Rambler

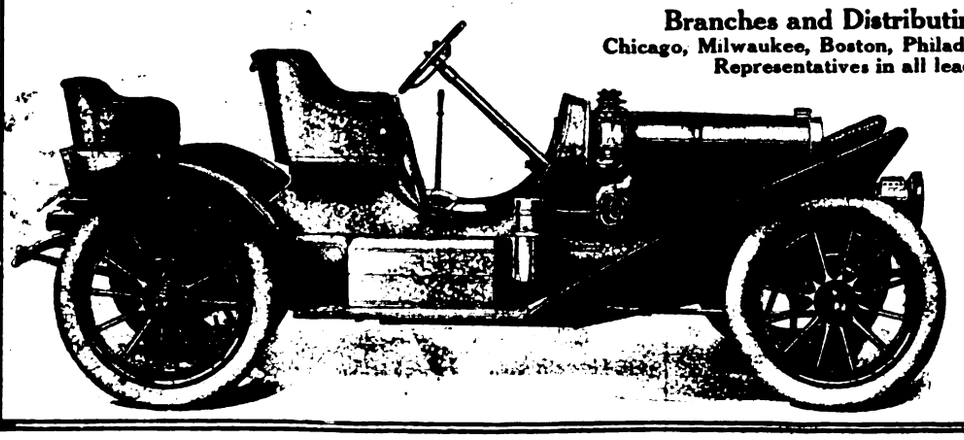
The Car of Steady Service

Our catalog tells the story. Write for it today or see our nearest representative.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.

Branches and Distributing Agencies:
Chicago, Milwaukee, Boston, Philadelphia, San Francisco.
Representatives in all leading cities.



Model 34A,

32 H-P,
Selective
Transmission
Shaft Drive

$2,250.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, April 23, 1908. o. 4

ADVISES MAKERS TO CO-OPERATE

American Consular Representative Says It's Best Way to Open South America—Brazil as an Example.

"Special representatives sent here by the more progressive and aggressive manufacturers to study the field find that there is nowhere in Brazil a distinctively American house handling American manufactured products," says Vice-Consul General Slechta in a report to the Department of Commerce and Labor. "There are two or three dealers in agricultural machinery in Rio de Janeiro who give preference to certain lines of American goods. Almost all others are concerns with German, British, or French connections, which give decided preference to goods originating in their respective countries. It is easy to see just what this means. In the matter of automobiles, for example, there are in Rio de Janeiro four well-equipped garages with repair facilities, but in not one of them can an American machine receive the same attention as a French, German, or English car. This is due, in a great measure, to unfamiliarity with American automobiles.

"During the past year not less than eight large motor car manufacturers in the United States have had special agents in Brazil, but as yet not one of them has been successful in establishing an agency that does any business for the manufacturer. None of the concerns which have taken agencies of American automobiles are in a position to establish a repair shop and garage facilities, because such a course involves an outlay that the present demand for any particular make of American car does not warrant. As long as these conditions continue Brazilians will buy other than American machines. It is not reasonable to expect individual manufacturers to establish branch houses in Rio de Janeiro, but certainly there are enough American cars of various makes to warrant the establishment of a repair shop and garage especially for American cars.

"This, it would seem, might be made a legitimate function of the Association of Licensed Automobile Manufacturers. Perhaps for the first six months such an establishment would not pay expenses, but it ought to be the means of securing a foothold for American built motor cars in a market which is certain to demand an increasing share of attention on the part of the foreign departments of American automobile factories. The association should establish a permanent exposition of American cars and, in connection therewith, make it their object to work with each member of the organization to the end of securing proper local agents in other Brazilian cities."

Pope Receivers Make a Full Report.

Albert L. Pope and George A. Yule, receivers of the Pope Mfg. Co., have filed in the Superior Court at Hartford, Conn., a statement of the business transacted by them as receivers from August 14, 1907, to and including March 31, of this year. It shows that they received $880,496.04 and disbursed $822,952.34, leaving a balance of $77,791.25. In addition to the financial statement the receivers make a general report of the condition at the factory.

Brock Returns to the Autocar.

Marcus I. Brock is back at his old post, that of sales manager of the Autocar Co., Ardmore, Pa. He filled that office previous to his engagement as assistant general manager of the Association of Licensed Automobile Manufacturers.

Bartlett Joins the Long Arm System.

E. J. Bartlett has been appointed chief engineer of the Long Arm System Co., Cleveland, Ohio. Previously he was attached to the engineering staff of the Electric Vehicle Co.

V. E. Minnich, director of the selling division of the H. H. Franklin Mfg. Co., has resigned that office.

A. M. C. M. A. ASSUME WHOLE SHOW

Acts Promptly After Withdrawal of Automobile Club—January Dates Probable —Road Show "Postponed."

The Automobile Club of America having more or less gracefully bowed itself out of the show business, its former not wholly silent partner, the American Motor Car Manufacturers' Association, lost no time in very cheerfully assuming the whole burden. This was done at a meeting of the association's show committee in New York on Tuesday last, when it was announced that Grand Central Palace, New York, already had been leased and again will be the scene of the "independent," or open show, as the promoters prefer that it be styled.

The dates for the show have not been definitely settled, but it is practically assured that January dates will be selected. The Association had its fill of so-called "early shows." There is not a voice in favor of another event in October.

The show committee of the Motor and Accessory Manufacturers, Inc., was in conference with the A. M. C. M. A. body and will be apportioned a block of space, as heretofore. The show will be, however, an open one in every sense, and despite the glowing reports of the exclusive importers' "frost" in Madison Square Garden in January last, it is probable that all of the importers who are not allied with the Association of Licensed Automobile Manufacturers will be found in the Palace show.

In the diplomatic language of one of the officials, the traveling trans-continental which the A. M. C. M. A. contemplated, has been "postponed, but not abandoned," but the expense and obstacles were found to be so great that probably the last has been heard of it. It was found that the cost would exceed $110,000; no reduction of fares being obtainable. The association itself also would be required to conduct the dining car service.

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IN THE RETAIL WORLD.

Lombard & Wood, a new firm, has located on Columbus avenue, Boston, to deal in second hand cars. They have taken the office formerly occupied by E. S. Breed.

The Twenty-first street Garage Co. has been incorporated in Toledo, Ohio. George L. Craig, formerly of the Craig-Toledo Automobile Co., is the chief stockholder.

C. S. Henshaw has opened headquarters at 288 Columbus avenue, Boston, as New England representative for the Haynes. He occupied the same premises several years ago.

Priest & Dinneen, Cheyenne, Wyo., resently opened a new garage in that city, where they sell and let cars. The firm operates under the name of the Cheyenne Rubber Tire Co.

George K. and Harry E. Rapp are to open D. S. Spencer's shop at Oyster River, Saybrook, Conn., as a repair shop. They will equip it fully for the work of repairing automobiles, boats and engines.

Percy H. Johnson has leased the City Hall garage at 9 and 11 Hill street, Newark, N. J., and will make a specialty of storing automobiles. He will operate it in connection with his place at 265 Halsey street.

The Livingston-Ramsdell Motor Car Co. has leased part of the De Camp building at 234 Halsey street, Newark, N. J., and will conduct the agency for the Palmer & Singer cars. Arthur Newton will be sales manager.

The Pelen Automobile Co. has been formed at Logansport, Ind., and has located a garage in South Champion street. William Pelen and Anson Thornton compose the company which will handle the Jackson cars.

Charles F. Cleveland has opened a garage at 225 West Broadway, Princeton, Ind., where he carries a stock of accessories and supplies. He deals in automobiles and bicycles, and makes repairs on both classes of vehicles.

Janesville, Wis., is to have a garage on West Washington street. Frank Millman and E. J. Manning are fitting up a livery barn building for the purpose. They will conduct a repair business in connection with the garage.

Prophetstown, Ill., is to have a first class automobile establishment, comprising a salesroom, garage and repair shop. P. C. Kempster has begun the erection of a brick building, about 50x36 feet, which will be pushed to early completion.

James Crotty and John P. Viola, of Great Barrington, Mass, constituting the firm of Crotty & Viola, have purchased the automobile business conducted by Charles S. Taylor in a building which they own on Railroad street. The business is to be managed by Ellis Holbrook.

The first garage at Superior, Wis., is to be established by the Russell-Rhodes Co., who will handle the Franklin cars. It will be located at 912 Ogden avenue. The members of the company are A. M. Russell, H. C. Russell and A. L. Rhodes, all of whom are familiar with automobile work. They contemplate establishing later a garage in Duluth, Wis.

Bar Harbor, Me., is to have a larger garage this summer than the one conducted last season by F. P. Pray & Son. The same firm will provide it. The location is outside the limit within which motor cars are prohibited. Mr. Pray has made arrangements to meet cars at Hull's Cove, taking the owners across by carriage or launch after the cars have been housed.

Robert Gugin, the Franklin dealer at Vancouver, B. C., has formed a co-partnership with H. S. Rolston. Rolston is secretary, treasurer and manager of the Walworth-Rolston Co., dealers in vehicles and farm implements. The new co-partnership will operate under the name of the Franklin Automobile Agency and will handle Franklins exclusively. A new show room will be opened in the building of the Walworth-Rolston Co.

E. O. Hall & Son, Honolulu, H. I., have purchased the garage of the Associated Garage Co., Ltd. The building is located on the corner of two main streets and is 60x 200 feet; it is of brick and concrete and modern in every respect. The Associated Garage Co. was organized originally by a number of enthusiastic automobilists of Honolulu, but the Garage organization as a mutual benefit society did not prove a financial success and the owners were glad to sell out.

J. W. Mason, Newark agent for the Maxwell and the Stoddard-Dayton cars, has opened new salesrooms at 350 and 352 Halsey street. The garage, considered one of the most complete in New Jersey, was formally opened on Saturday afternoon, 18th inst., with a brass band and refreshments for the entertainment of the many invited guests. The new building has a frontage of 45 feet and a depth of 100.

Important Decision Affecting Garagemen.

Even when a car is accepted as "dead" storage, the garageman is responsible not merely for its safe keeping, but for a deterioration due to neglect, is the substance of a decision handed down this week by Justice Weil, in the municipal court for the Fifth District, New York. It grew out of the suit of Miss Gertrude G. Rothschild against the Empire State Garage to recover damages for loss of parts of a battery and deterioration to tires of her electric victoria. In her complaint she asserted that she left her car at the garage on dead storage in December, 1906, and that when she sent for it the next summer she found the tires in bad condition from not having been "jacked up" and because the machine had not been kept in a dry, light place; in addition, certain fittings had disappeared. She recovered judgment for $113 and costs.

THE WEEK'S INCORPORATIONS.

Wilmington, Del.—Maxwell Taxameter Co., of Wilmington, under Delaware laws, with $500,000 capital.

Cleveland, Ill.—Cleveland Motor Car Co., under Illinois laws, with $300,000 capital. Corporator—R. Bacon, Jr., Chicago, Ill.

Denver, Col.—Pavelka-Winter Auto Co., The, under Colorado laws, with $2,500 capital. Corporators—W. C. Faucett, E. A. Pavelka, and Karl Winter.

Denver, Col.—Donaldson Motor Car Co., The, under Colorado laws, with $10,000 capital. Corporators—Arthur S. Donaldson, Elmer T. Soden, and Samuel R. Steinmetz.

Lockport, N. Y.—Lockport Rubber Works, under New York laws, with $300,000 capital. Corporators—J. E. Davis and Harry M. Wood, Erie, Pa.; M. Steele, Lockport, N. Y.

Boston, Mass.—Blair-Forth Mfg. Co., under Massachusetts laws, with $100,000 capital; automobiles. Corporators—C. Forth, president, Winthrop, Mass.; W. Blair, treasurer, Newton, Mass.

Detroit, Mich.—John H. Brady Auto Co., The, under Michigan laws, with $10,000 capital; to buy sell, repair, and store automobiles. Corporators—John H. Brady, Albert L. Stephens, Martin Borgman.

Jackson, Tenn.—Southern Motor Works, The, under Tennessee laws, with $50,000 capital. Corporators—Atwell Thompson, W. H. Collier, Exile Burkitt, L. L. Curtiss, and W. E. McClamrock.

Brooklyn, N. Y.—Electric Welding Co., under New York laws, with $24,000 capital. Corporators—Ove Lange, 260 Eighty-third street; Christian Nielsen, 209 Ninth street; Herman O. Amundsen, 269 Eighty-third street, Brooklyn, N. Y.

New York City, N. Y.—St. Louis Car Automobile Co., under New York laws, with $20,000 capital. Corporators—John F. Valieant, 5 Nassau street; Louis A. Hopkins, 1706 Broadway, New York City, N. Y.; Warner S. McCall, St. Louis, Mo.

New York City, N. Y.—Uptodate Mfg. Co., under New York laws, with $25,000 capital; manufacturing automobiles, motors, etc. Corporators—C. S. Goodfellow, Rockaway Beach, N. Y.; J. R. Conkey, New York City, N. Y.; J. Van Vliet, Baltimore, Md.

New York City, N. Y.—Hexter Taxameter Cab Co., under New York laws, with $100,000 capital. Corporators—Ralph Hexter, 207 West 120th street; Thomas F. McDermott, 121 West Eighty-ninth street, New York City, N. Y.; George F. R. Snowden, 363-A Fourteenth street, Brooklyn, N. Y.

New York City, N. Y.—Terry, Tench & Proctor Tunneling Machine Co., The, under New York laws, with $1,500,000 capital; to manufacture tunneling machinery, engines, motors, cars, trucks, etc. Corporators—J. J. Banks, Denver, Col.; A. S. Luria, E. E. Morris, New York City, N. Y.

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TO RESTRICT RIGHTS IN PATENTS

Congressional Bill to Amend Laws and Prohibit Sale or Lease to Combinations —Cancellation the Penalty.

Representative Campbell has introduced a bill into Congress to suspend the patent and copyright laws of the United States when a patent or copyright or any article or product protected by patent or copyright is owned, leased, or used by any trust or monopoly in violation of any law in restraint of trade by providing that whenever any letters patent issued by the United States, or any article, commodity, compound, device, mechanical appliance, or machine protected by patent; or any article protected by copyright issued by the United States is owned, leased, used, or controlled by any individual, firm, association, syndicate, corporation, or combination which is engaged in any vocation, business, or enterprise in violation of any law of Congress or of any State, prohibiting, restricting, or regulating trusts, monopolies, or combinations which operate in restraint of trade, the right to any protection under the patent or copyright laws of the United States shall cease and terminate.

It would be the duty of the Attorney-General or any district attorney to institute suits in law or equity when the facts should warrant such suit or suits in any U. S. circuit court where the patent or copyright is owned, leased, used, or controlled, or the articles or products referred to are manufactured, used, produced, or sold in violation of the Act.

It would further provide that the final judgment or finding of the U. S. Circuit Court that any letters patent or copyright of any article, compound, commodity, device, mechanical appliance, machine, or any other work protected by letters patent or by copyright is owned, leased, used or controlled by any individual, firm, association, syndicate, corporation, or combination engaged in any vocation, business, or enterprise, in violation of any law of Congress, or of the State prohibiting, restraining, or controlling trusts, monopolies, or combinations which operate in restraint of trade shall operate as a forfeiture or cancellation of such letters patent or copyright. The leasing of patents is common and the effect of the law would be far reaching.

Weidner Succeeds as Amateur Sleuth.

George Weidner, who represents the Warner Instrument Co. in Detroit, Mich., has developed the "detective instinct." About three weeks ago the Warner branch in Detroit, at 239 Jefferson avenue, was broken into and over $1,200 worth of Auto-Meters and connections were stolen. Weidner suspected Walter Morris, a negro, of having committed the theft, but he couldn't see how the colored fellow was going to get rid of the property, but when Morris made a trip to Cleveland, Ohio, he was trailed and arrested there and brought back to Detroit. In the sweat box he confessed that he had stolen the instruments and sold them to one Robert Wachman, of the Wachman Motor Mfg. Co., but when Wachman was brought to police headquarters he denied all knowledge of the matter. Finally he became anxious and sent for his attorneys. They came and advised Wachman to "fess up" upon being granted immunity from arrest. This he did and the speed indicators were found where he had buried them securely wrapped in hay in the rear of another store. Wachman bought the entire lot of stolen goods at a less than "bargain price." He paid the negro thief but $18.

Mercedes Liabilities and Assets.

Schedules in bankruptcy of the Mercedes Import Co., New York, which was backed by "Ice King" Charles W. Morse, but which failed several weeks since, show liabilities of $228,755, and nominal assets of $261,514, consisting of cash on hand, $2,395; cash on deposit, $134,777, of which $132,995 is with C. L. Charley of Paris, and the balance in banks here; notes, $16,715; accounts, $43,195; stock of automobiles, parts, etc., $32,517; machinery, $1,102, and office furniture and fixtures $813. Among the creditors are the National Bank of North America, $81,979, of which $4,500 is secured. The bank and Henri Lehman both claim to be owners of a note of $25,000 of the company to C. L. Charley for money loaned; First National Bank of Bath, Me., $18,500 on a note of the company to C. L. Charley for money loaned, and the bank and Henri Lehman both claim to be owners of the note; Garfield National Bank and C. W. Morse, $25,000 on a note of the company to Mr. Morse for money loaned and by him discounted at the bank; A. Brann, $12,500 on a note of the company for money loaned and pledged to the National Bank of North America as collateral; Mr. Brann and John S. Primrose each own half of the note; R. E. Fulton, $6,300, money loaned; Smith & Mabley, $31,754. The following Paris creditors are on contingent liabilities: C. L. Charley, $12,233, for commissions; Rothschild & Son, $10,480; Kellner & Son, $5,242, and Grummer, $10,493, for automobiles ordered but not taken.

Yule Goes from Lamps to Golf Balls.

W. H. Yule, son of George A. Yule, one of the receivers of the Pope Mfg. Co., and who has been active in the affairs of the Badger Brass Mfg. Co., of which he is a director, has tendered his resignation to accept the management of the golf ball department of F. F. Goodrich Co. Yule long has been prominent in golf affairs, having won among other things, the Wisconsin State championship, and the call of the greens proved too strong to be resisted.

MORE "SUBSTITUTION EXPOSED"

Splitdorf Gets Complaints About Coils and Unearths the Cause—Inferior Imitations Sold as Genuine.

While almost all automobilists realize the necessity of making replacements with parts made by the manufacturer of the original article, it is found that it always is not the simple matter one would think to obtain the genuine. A case in point is well illustrated by the recent experience of C. F. Splitdorf, whose ignition specialties are so well known as to lead to the conclusion that substitution for them would be almost impossible.

For several weeks Splitdorf had been receiving complaints that his coils were not giving satisfaction. Investigation showed that the complainants, in every instance, had used the coils for a long time, with entire satisfaction for many months, but later with results that were far from satisfactory to the owners. A peculiar feature of the complaints was in the fact that they were made only by persons living in a certain part of the west.

Several coils were sent to the factory where they were carefully examined and it was found that the contact screws and springs were the cause of the trouble. For a long time the experts were puzzled, for though it quickly was learned that the contact points on the screws and springs were made of german silver instead of iridio-platinum, it was not understood at the factory how this could be as no german silver had ever been used there for this purpose. Finally it was found that the entire screw and spring had been made by some irresponsible manufacturer who so closely imitated the genuine articles that even the Splitdorf people were fooled.

Following out this clue, the maker of the counterfit parts was soon discovered and notified that unless he stopped the manufacture of the imitations he would be proceeded against in the courts. As an additional precaution the originals now are all stamped with the Splitdorf name.

German silver is almost totally useless as a contact point, as the heat from the sparks quickly destroy it and when destroyed the results to be obtained from the coil are very poor.

Duryea Brings Forth the "Buggyaut."

Charles E. Duryea will style his new motor buggy the "Duryea Buggyaut." It will be built in the old Duryea Power Co.'s factory at Reading, Pa. The motor is of the two cycle type, air cooled and of 10-12 horsepower. Duryea's invention, described in his own words, consists of "grooved friction driving rollers, a few necessary fittings, a common buggy and a motor." It will sell for $750.

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The "Maxwell"

It's a Heap of Satisfaction

—Maxwell owners say—to drive a car you're not ashamed of in any company—one that, like a well-bred woman, however meagre her purse, is yet at home in the best society.

Now there be cars which, tho sold for only a little less than Maxwells, yet have such a shoddy appearance—such a "dinky" aspect—such a "cheap" look—the owners always feel like apologizing for driving them—tho a slim purse is surely no disgrace.

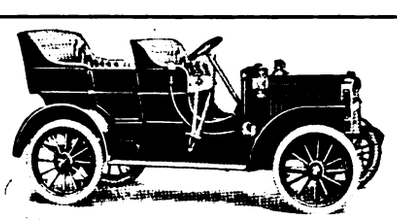
What is it gives to such cars the cheap look? It's difficult to define. Yet it's there—you can't escape it any more than you can fail to notice ill-breeding, however rich the garb with which it is clothed.

Next time you go to the Country Club, the golf links, anywhere that Wealth and Culture meet, note how many Maxwell cars and how few other low-priced ones are parked among the Foreign Nobility and the High Caste American machines.

And the Maxwells will look as if they belonged there; the others like a country bumpkin in a drawing-room—well meaning but out of place.

It's this indefinable something—this outward appearance that somehow tells of quality inherent—bred-in-the-bone construction—has given Maxwells the title "The Aristocrats of Moderate Priced Cars."

Maxwell cars are made in six models; ranging in price from $825 to $3000 Perhaps the most popular model this year is the four-cylinder, 24-28 horse-power family touring car at $1750—same chassis equipped with "roadster" type body, seating two in rear—same price.



Model "D"—$1750

The catalog tells all about all of them—and it's free.

Benj. Briscoe President

MAXWELL-BRISCOE MOTOR COMPANY

Members A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

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THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



WHITE WINS FORT GEORGE HILL-CLIMB

A 30 horse-power White Steamer scored the fastest time in the great hill-climb in New York on April 9th, making the ascent of Fort George Hill from a standing start in 32⅕ seconds, as compared with 36 seconds, scored by the fastest of the gasoline cars. All makes, domestic and foreign, claiming special hill-climbing ability, were represented in this contest.

The White has won so many important hill-climbs that its superiority in this style of competition is no longer questioned. The reasons for this superiority may be stated as follows:

1. The White engine, when called upon to do so, can probably develop more power than any other type.
2. It is certain that a larger percentage of the power of the engine is delivered at the rear wheels in the White than in any other machine. This was proven with mathematical exactness in the great English contest at South Harting, held for the purpose of determining this point.
3. The question of proper gearing for different gradients is not a vital one in the case of the White, as the car adapts itself perfectly to varying conditions. In other words, the unique flexibility of the White is of considerable advantage in hill-climbing contests, just as it is in touring or in city use.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 23, 1908

Clearing of the Dashboard.

One token which shows that the every day owner has come to regard his motor car as a utility rather than as a play toy is evidenced by the tendency to get away from the use of gimcracks adorning the dashboard and other conspicuous parts of the machine. Formerly it was the rule rather than the exception for the automobilist to fit out his car with every imaginable sort of a contrivance running from an electric cigar lighter to a barometer. But this disposition to equip with every conceivable novelty or accessory that may be devised by the imaginative brain for the purpose of enticing the dollars from the pockets of the unwary, has given way to the sensible idea of utilizing only those things which may be of real service. In arriving at this determination, the private owner has undoubtedly been influenced by the action of many of the more prominent manufacturers who have ceased to so furnish the dashboards of their cars that they created the impression of an accessory exhibit at an automobile show.

Instead of coil, oiler, clock, switch, etc., the dashboard of a modern car contains only a sight feed glass and a switch; even the coil has been placed out of sight on many cars and where formerly brass trimmings abounded they have now been largely done away with or have been exchanged for oxydized embellishments which look as well and require less attention. While there still is and always will be a demand for those accessories which add to the comfort or convenience of the occupants, the day has passed when a host of useless ornaments will be thought necessary as adjuncts of a properly equipped car. Signaling devices for limousines, and speed indicators for all cars have proven their value and become necessities rather than luxuries, but the days of thermometers and barometers, grade meters and various other gimcracks as fittings for the dashboard has passed, and with the passing comes the evidence of a sane conclusion that the automobile is a vehicle of utility rather than a means for ostentatious display.

The Used Car Situation.

With the rapid increase in the number of cars in use, or at least extant, the problem of dealing with the used, otherwise second-hand car, is daily becoming more complicated. It is an unquestionable fact that the number of purchases of new cars involving the exchange of used cars, either directly or incidentally, is on the increase. Evolution of marketing conditions has bred a most perplexing situation for the agent and dealer out of this natural state of affairs and one which is likely to become even more vexing as competition grows keener.

Many agents make it a rule to take no cars in trade, except those of the lines they themselves handle regularly; others make no trades at all; still others, fearful of losing business by such a policy, give way to various exceptions and take on cars which appear to be readily saleable; again, others are glad to trade on any basis so long as there is a look-in for speculative profit. The problem in this connection is to determine rightly how to dispose of these exchanges which, strictly speaking, are nothing more nor less than collateral covering the price of the sale. Obviously, the sooner the second-hand machine is cleared from the floor the sooner the full benefit of the sale is realized. This is an important point, especially to the agent dealing on small capital. But how to accomplish this, and how to reduce to its lowest terms the "risk" which is involved in any second-hand proposition, is entirely another matter.

Broadly speaking, but two courses are open to the agent who finds himself in this dilemma. Either he may hold the machine and attempt to accomplish its sale himself, or he may turn it over straightway to a second-hand dealer accepting in return that individual's cautious appraisement of its value in return. In the first instance, the costs of repairs and overhauling, storage, selling, and the incidental charges, not to mention the delay in closing the account of the original sale, must fall on his own head. In the second alternative, he must suffer a loss which is supposed to compensate for these factors, but which in addition robs him of the possible profit of a "lucky" sale as well as that which goes to the pocket of the second-hand man. Furthermore, in the latter instance, he places himself in the unpleasant position of catering directly to a class of dealers who are openly regarded as a thorn in the flesh and a disturbing as well as demoralizing factor in the trade.

The second-hand dealer is a specialist in his own line; he has nothing at stake in the way of reputation, as a rule; he recognizes no conflict of scruples in recommending one car or another to the possible customer; and generally speaking he is able to command a better price than the "legitimate" dealer, who is compelled to subordinate all other business to the main chance of selling for the maker or makers he represents. In this way the second-hand dealer furnishes a natural and happy outlet for cars taken in trade, and in most cases, the exchange of a new for an old car is accomplished with better all-around economy when the regular agent acts as a clearing house for the trade than when the original owner sells direct to the second-hand dealer and subsequently buys outright of the agent.

Were it possible to bridle the dealer in used machines to confine him to that line exclusively and prevent him from acquiring bankrupt stocks to sell at cut prices, and otherwise practicing the tactics of the shyster, his recognition would be more cordial and his support more genuine and legiti-

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mate. As it is he is a poser and his influence makes the second-hand problem a knotty puzzle.

Possibilities of Producer Gas.

Producer gas, though employed to a considerable extent in large industrial plants where it is essential to reduce the cost of power as far as possible, has not generally come to be considered as a possibility in connection with the propulsion of motor vehicles. The description of certain tests with a form of producer especially designed for automobile use, as recorded in another column, is, therefore, of no little interest, because producer gas is essentially an economical product.

The producer is a refined form of gas generator to which is added a scrubber of some sort, capable of removing only the coarser impurities from the gas, and so delivering it to the engine—made to order, as it were. It is practically a carburetter for solid fuels. By its use, the combustion of solid fuel is divided. The earlier stages are devoted to the heating of the fuel to a point where it gives off the combustible vapors which under ordinary circumstances would yield to combustion. The process stops short of that point, however, because of the lack of a sufficient supply of oxygen to carry it on. The second stage involves the combustion and expansion of those gases together with a much greater volume of air in the cylinder of the ordinary internal combustion motor. From the economic standpoint a greater proportion of energy can be obtained from a given amount of fuel by the use of a producer and gas engine than by transforming the same basic supply into the latent energy of steam and using it expansively in an engine. Compared with the power obtainable from liquid fuel by the simple process of vaporization and aeration, it is still cheaper when measured in terms of net cost.

Because of the necessary weight and size of the apparatus, the use of producer gas for automobile purposes will probably be limited to the purposes of the commercial vehicle. That it is possible to construct small plants on a fairly economical scale has been proved by the success of the Capitaine system, as applied to motor boats abroad, as well as by the case more in point in this connection. As a problem, the use of this system involves the design of a compact and efficient form of generator, which considering the fact that the suction producer, the type suited to this class of work was only introduced on a commercial scale in 1895, is by no means a sinecure.

In order to work out a suitable design, the builder must begin at the beginning and proceed along lines which are largely empirical and based on personal experience, to a great extent. Therefore progress cannot be rapid. At the same time, the possibilities attendant upon the direct use of coke or anthracite without the complication of the steam boiler and its auxiliaries, is too attractive to be ignored. With the probable future use of heavy road trains employing multiple-unit power plants and working in competition with all other modes of freight transportation, the question of fuel cost will be regarded in a very different light from that of the present time. In such a case, the fact that the cost of traction per horsepower may be more than cut in half—which is a conservative estimate—makes the inducement to attack the matter of producer design for this particular purpose a most alluring one.

Contributing Cause of Accidents.

While neither excuse nor palliation can be offered for the automobile driver who is a party to or the cause of an accident that occurs while his car is traveling at a high rate of speed, there are conditions under which an accident may occur when the driver is far less culpable than appearances seem to indicate. It long has been recognized that there is a clearly defined limit to the sustained nervous energy of which mankind is capable.

Legislatures have found it necessary, for the protection of public safety, to make laws governing the number of hours of duty which may be demanded of railroad employes, and others, whose labor had to do with the preservation of the lives of travelers. And these laws have been passed and have been enforced to the end that no man, whose mental and physical activity has been diminished by the abnormal strain of long, continued application to labor that saps his nervous energy, should be in charge of anything—locomotive, trolley car or switch, where the safety of mankind would be jeopardized by his inability to handle emergencies that in a normal mental and physical condition would not present serious problems.

Unfortunately the owner of a motor car too seldom realizes that there is a limitation of the powers of his chauffeur. The latter often finds that the duties devolving upon him are in part to make the early morning trip to the owner's office, then to return to take madame on a shopping tour, followed by a ride through parks and drives in the afternoon, the theatre at night and then a ball or dinner, which keeps him from his bed until the early morning hours, a brief time for sleep and then to repeat with slight variation the same thing.

Obviously human nature can stand this strain only for a very short time. Then when mentally unstrung and physically tired, an emergency arises, the chauffeur is not capable of the clear, quick thought and action necessary to avoid the accident, and he is blamed for carelessness when in truth the condemnation should be visited upon the head of the employer who, considering only his own desires, demands of another that which no man is capable of giving. It is a contributing cause of accident too often unsuspected and rarely, if ever, remarked.

COMING EVENTS

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

April 29, 30 and May 1, Detroit, Mich.—Detroit Automobile Dealers' Association's three days' reliability run to Saginaw, Kalamazoo and return.

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

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TROUBLES BESET BRIARCLIFF RACE

Threatened Hold-up Causes Promoters to Scurry for Cash—More Preliminary Accidents on the Course.

Despite its near approach, the race for the Briarcliff trophy, which is due to take place over 32 miles of crooked roads in Westchester county, New York to-morrow (Friday) morning, is still somewhat "up in the air. In fact, there were inside whispers yesterday afternoon that the race might be postponed.

State Engineer Frederick Skene has got his dander up and has sprung an eleventh hour holdup of the promoters by threatening to stop the race unless sufficient cash is deposited with him at once to cover the cost of damage that the race will do to the roads.

There is a statute which provides that before a contest is run over the State highways a sum of $200 for every mile used first must be deposited with the State engineer to be used to repair any damage caused by the race.

It appears that in making preparations for the race some one carried on negotiations with a subordinate in Skene's office, instead of with the State engineer himself, and the latter got mad. He determined to show the Briarcliff promoters "who's who," and he is doing it in a manner not calculated to smooth the tempers of Chiefs Moore and Morrell.

When the ultimatum came from Skene that unless the money was deposited in his office he would order the sheriff to stop the race, Moore and Morrell began to "throw fits." They scurried about and secured a bond for $4,500 from a bonding company, but Skene said only cash would be acceptable. After considerable persuation, the promoters induced Skene to come to New York Tuesday night, and talk it over. A long session resulted, but Skene remained obdurate and as the promoters have need for all the cash available, they are much distressed. At present the deadlock is still on, but expected to be broken at any moment. So far as can be learned, the Automobile Manufacturers' Committee, which is the style employed by Messrs. Morrell and Moore, has not been incorporated, nor has any bond been executed indemnifying the promoters and participants from accident, so that apparently each individual will be responsible for any accident or damage that may result.

If present arrangements are carried out the 22 cars will start from in front of the grandstand at Briarcliff Manor, at one minute intervals, beginning at 4:45 a. m., in the following order:

No.	Driver.	Car.	Piston Displacement.
1	Paul Sartori,	40 Bianchi.....	82.52
2	Emanual Cedrino,	60 Fiat.....	95.0336
3	Herbert Lytle,	50 Apperson....	103.86
4	Louis Strang,	50 Isotta	102.38
5	F. W. Leland,	30 Stearns.....	90.72
6	E. H. Parker,	60 Fiat	05.00
7	Harry Michener,	Lozier.....	86.59
8	Guy W. Vaughn,	30 Stearns....	90.728
9	Ralph Mulford,	Lozier	86.59
10	Dan Murphy,	35 Maja	58.92
11	Al Poole,	50 Isotta	102.38
12	Montague Roberts,	60 Thomas.	95.0334
13	Barney Oldfield,	30 Stearns....	90.728
14	Maurice Bernin,	35-45 Renault..	86.59
15	Geo. Robertson,	50 Panhard....	103.864
16	Wm. H. Hilliard,	40 Hol-Tan...	72.38
17	A. L. Campbell,	40-45 Allen-King	78.54
18	Julien Block,	35-45 Renault....	86.59
19	Hugh N. Harding,	50 Isotta...	102.38
20	Louis Bergdoll,	60 Benz	103.00
21	J. Seymour,	50 Simplex.....	103.83
22	Wm. Watson,	50 Simplex.....	103.83

This week has produced a bull market in Westchester county. Eggs and milk have risen in value, proportionate to the increase in rates for window seats in farm houses fronting the course, and it is said on good authority that Walter W. Law, who is giving the trophy that is to be raced for, has sent all his cows up into the back country and has staked his erstwhile pasture lots into pleasing sites for bungalows and country estates. He confidently expects the race will prove a profitable real estate booster and will draw bigger crowds than all the free Sunday excursions he could run in a year.

The task of oiling the course was completed early this week but that treatment has not rendered it less dangerous. Despite two or three minor messages here and there with a steam road roller there yet remains many bumps.

The course was officially measured this week and was found to be 32.6 miles in length instead of 30 miles, so that ten laps of the race will make 326 miles, instead of 300 miles. There has been some talk of reducing the distance to eight laps, but no official announcement to that effect has been made. As the Motor World has stated many times, it is doubtful if a more dangerous course could have been picked out than the Briarcliff course. It is somewhat straighter than a corkscrew, but not much. There is a variance as to the number of turns on its sinuous 30 miles. Louis Bergdoll (Benz) says he has counted 117 turns, while Frank Leland (Stearns) places the number at 90.

The question naturally arises, will human endurance withstand such a strain as that necessary to cover ten laps of this danger-fraught course? Eliminating all chances of nerves becoming frazzled—and be it understood that every driver that goes into the race to-morrow morning will have plenty of need of all the nerve he can muster—will the drivers be able to withstand the physical strain? In practice not one of the 22 entrants has covered more than three laps at a time, and this has been quite enough to add to their weariness. It is conceded that there are at least 70 turns where gears will have to be shifted, and as each change requires two operations of the arm, making at least 1,500 in all, it is a safe bet that the winner will not feel much like shaking hands after the finish.

In view of the dangerous nature of the course efforts are being made to insure a thorough ambulance service during the progress of the race. The course has been dotted with telephones not more than a mile apart, and a hospital corps of eight surgeons in that many automobiles equipped especially for the purpose, besides eight nurses, will be stationed at the most dangerous points on the course.

Just what point of the course offers the most chance for possibilities is difficult to determine. There is not one single stretch in the 30 miles circuit that can be described as a straight mile run, and the curves at certain points are more dangerous than the worst on any circuit over which an automobile race has ever been run, not even excepting the Ardennes circuit. One of the points where the drivers will be forced to slow down unless they care to risk their lives and all chances of winning the race is at the southern part of the oval near Valhalla. The turn here is more than a curve—it is a right angle, and one of the places the drivers refer to as "sporty." Another bad place is at Armonk, where there is a bend in the road in the form of a V and less than 30 yards in the entire length. The northern end of the circuit from Pine Bridge to Mount Kisco abounds possibly in unpleasant eventualities. The road is continuously serpentine, with rocks abutting dangerously near the track, with trees, telegraph poles, stone walls, and parapets threatening at every corner. At Mount Kisco there will be a control, the only one on the course, and drivers will have to take ten minutes to pass over about a half mile of road. Cards will be stamped upon entering and leaving, and these dropped in a locked box on the dashboard.

Three bad accidents already have occurred this week. On Tuesday morning J. B. Ryall, who was "feeling" the course in a runabout, in which were three persons, ran off the Saw Mill bridge near Eastview and plunged into the creek. Ryall sustained a compound fracture of the ankle of his already damaged left leg, and the passengers escaped with slight injuries. The following morning A. C. Campbell, driving the Allen-Kingston, ran off the bridge at Armonk. His jaw was broken and it is not thought he will be able to start. George Robertson (Panhard) ditched his car at Wampus Lake, but escaped with bruises.

How the promoters intend to keep the expected crowds from encroaching on the already too narrow course was made known this week. There will be about 1,000 national guardsmen, "volunteered" from two New York regiments. It is stated that the "volunteers" will not carry State guns, but what they will carry, or with what real authority they will be vested is not made clear. It is stated also that these "volunteers" will cost the race promoters $7,000.

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OFF THE MAIN LINE OF TRAVEL.

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NEW YORK-PARIS "RACERS" AT SEA

Automobiles Race Across the Pacific on Steamships—Godard Gives up and Sells the Motobloc Car.

Three steamers—the Aki Maru, the Glen Logan and the Shawmut—are now engaged in the great trans-Pacific ocean race, the second stage of the New York-Paris automobile "race." The Aki Maru is due at Yokahama, Japan, on April 29, and the Shawmut on May 10. The Glen Logan, which goes directly to Vladivostok, is due at that port on May 9th. The Aki Maru left Seattle on April 14th, the Glen Logan on April 20th, and the Shawmut on April 21st, which is sufficient foreword to lead up to how the steamships get into an automobile "race" around the world.

When the Thomas car discovered that the Alaskan trails were impassible because of the melting snows, after having journeyed to Valdez, St. Chaffray, in charge of the De Dion car, then at Seattle, decided to take advantage of the information gotten by the crew of the American car, so he made all arrangements to embark forthwith on the Aki Maru for Yokahama. With him went the Zust car and a part of its crew. The latter were not in favor of taking advantage of the American entrant in this manner, but as St. Chaffray was determined, there was nothing for the Italians to do but to keep the French car in sight, so they embarked also on the Aki Maru.

Schuester, with the Thomas car, expected to sail from Seattle on the Glen Logan, direct for Vladivostok, but on account of difficulty in having his Russian passports vised by a Russian consul, as there was none in Seattle, the nearest being at San Francisco, he had to wait over a day and take the Shawmut to Yokahama. The passports will be vised there. Lieutenant Koeppen, of the German Protos, which intends to continue as a non-contestant, was geing to accompany the Thomas, but on account of the delay to the latter, the German decided to take the first boat to Vladivostok and there await the American car.

Lieutenant Koeppen's decision was brought about by his own difficulty. At Chicago he had engaged R. C. Schneider to drive the car, but at Seattle Schneider decided to go back to the Windy City, leaving Koeppen alone. The lieutenant wired to Berlin for two mechanics and they will be shipped across the Siberian railroad to join the car at Vladivostok.

It is the intention of the French De Dion, Italian Zust and American Thomas cars to proceed across Japan from Yokahama to Tsuruga by road, and there ship to Vladivostok. The French and Italian cars will have a lead of about eleven days after arriving in Siberia, but it is understood that the Italian crew has been ordered to await the American car and proceed with it across the Siberian frontier. This report is strengthened by the fact that Sirtori, driver of the Italian car, did not go with it on the Aki Maru, but remained in Seattle to arrange for the shipment of some parts. He sailed for Vladivostok on the Glen Logan, which is due to arrive there on May 9.

Charles Godard, who started from New York with the French Motobloc car in the great New York-Paris scramble, gave up the contest and shipped his car by rail to San Francisco, is in additional trouble. After Godard left New York word was received here that he was wanted by the Paris police on a charge of having obtained money under false pretenses during the Pekin-Paris "race" last year. When Godard reached San Francisco he sold the car and its outfit to a Nevada mining man for $1,650, it is stated. According to advices from San Francisco Godard was about to depart for dear Paris, when he was arrested by customs officials. They wanted the Frenchman to explain why he sold the car without the formality of having taken it out of bond, as it had been accorded free entry to this country, upon the condition that it simply was going through. What the customs officials intend to do with Godard is not stated.

Motorist with a 100,000 Miles Record.

It is believed that the first full authenticated instance of a man piling up a record of 100,000 miles has been found in E. C. Andrews, of the Liberty Mills Co., Nashville, Tenn. This record was not made with one car, but a peculiar feature of the matter is that the registering of the mileage was done on one Warner Auto-Meter, which was changed from car to car as the seasons advanced. Another case, not so well authenticated, is a record of 75,000 miles made by a Chicago man, who, however, does not care to have his name mentioned as he is not positive whether or not he missed one repetition of his odometer. A Warner Auto-Meter is on his car also.

Omaha Dreams of an Automobile Track

At the suggestion of U. S. Renne, of Smithland, Iowa, whoever he may be, a majority of Omaha's dealers have signified their intention of contributing funds for the purpose of repairing the old mile track at the fairgrounds with the newly organized National Automobile Racing Association, about which little is known except that it has its offices in Cleveland. The "Nara" expects to create a circuit of tracks for automobile racing, and Omaha is on the list.

First Entry for Hower's "Blind Run."

J. W. Maguire, of Boston, has made the first entry for Chairman F. B. Hower's "blind run" for the Glidden trophy, which starts from Buffalo on July 9. Maguire entered a Pierce-Arrow, naming C. R. Teaboldt as the driver.

BY "WIRELESS" FROM WERNER

Lone New York-Paris "Racer," Long Lost, Turns up in a Dream—Grapevine News in French Paper.

How fast the little germ of news may propagate when left to itself in its travels over the world is difficult to realize until the return mail brings in the "revised version" of some story, long grown stale. This is particularly true where patriotic journalism and trade interests combine to stimulate the creation of a piece of intelligence as startling as, for instance, that the long-forgotten Werner, which a New York newspaper despatched to Paris from Printing-house square a day ahead of the "regular" New York-Paris "racers," and which crossed a good part of the continent on a railroad train, had now assumed the leading position and is at present braving the northern terrors of the Klondike on the course oroginally laid down for the main expedition.

For this statement the Parisian "l'Auto" is responsible. In its issue of April 2, an item appeared which was substantially as follows:

"The New York-Paris race has entered upon a thrilling phase to which the veritably epic progress of the French Werner has contributed no small amount of honor. The American journals, notably the World, state that Drieghe and Hohman, who are conducting it, have aroused for themselves and their car the admiration of the New York masses.

"This is easy to comprehend, for the formidable duel which this car has forced upon the American Thomas car has resulted to its advantage. The Thomas, as a matter of fact has already embarked from San Francisco to rejoin them at Seattle, while our compatriots have stuck to the course with a coufage worthy of the knights of old. They maintain that the cars are made to run on land, and not to achieve their progress on the deck of a ship. Furthermore, you should see the enthusiasm which awaits them. Not simply have they reached Seattle—where a prize of 25,000 francs was offered—before the Thomas, but within the hour they have cabled that with the difficult passage of Alaska before it, the car of "John" (Thomas) renounced the over-passage of the Klondike and embarked directly for Vladivostok. The Werner did not hesitate to brave the course and remains alone at the head, more courageous and valiant than ever.

"This tickles our self-esteem all the more agreeably because the Americans are particularly interested in the Werner. Another advice states further that everywhere catalogs are in demand, and that their car is the object of examination which is not that of curiosity only, but of admiration."

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PARK BOARD CLINGS TO POWER

New York Commissioners Vote to Fight Against Enactment of the Automobile Bill Pending at Albany.

The New York State Automobile Association's bill introduced by Assemblyman Merritt, relating to highway control, now pending in the legislature at Albany, is to be opposed by the park commissioners of New York City. Commissioners Smith of Manhattan, Berry of the Bronx, and Kennedy of Brooklyn, held a conference on Friday, 17th inst., and adopted a resolution stating that the Park Board is opposed to the measure, which, if made a law, the commissioners say, will deprive them of the control of park highways, thereby permitting practically unlimited speed, the entrance to the parks of businness motor vehicles and the use of tire chains, which, they declare, tear up the macadam roads.

The commissioners say that since the enactment of a Park ordinance December 5, 1907, which prevented the further use of tire chains or other non-skidding devices in the parks and highways under their supervision, the automobilists have been awaiting a chance to get a bill through the Legislature which would take away the control the commissioners now have over the park highways. The corporation counsel will be requested to fight the bill.

The measure had been discussed in the Assembly at Albany on the previous Monday night and New York members joined with rural members in opposing it. The section of the bill which prohibits local authorities from enacting ordinances regulating the speed of automobiles was obnoxious to the New Yorkers, who made a plea for "home rule." Assemblyman Wagner said that it was a dangerous piece of legislation, and would give automobilists the right to run their machines at almost any rate of speed that seemed reasonable and proper. As a result of rural protests the bill was amended in committee on the 15th inst., so as to give rural communities the right to fix rates of speed in their respective precincts.

To further complicate the situation and despite the fact that the legislature is to adjourn next week, another automobile bill has been introduced in the lower house by Assemblyman Voss. This measure seeks to provide for the appointment by the Governor, of a commission of three persons to serve for five years with no compensation other than "their necessary traveling and other expenses." The commission may appoint a counsel at $4,000 a year and a secretary at $3,000. The bill further provides for registration certificates of vehicles on payment of $3; the fee required in case of previous registration is to be $2. Speed of 30 miles per hour may be maintained upon any public highway, but when approaching any bridge, dam, curve or descent it will be unlawful to exceed a rate of speed faster than 10 miles per hour. The bill includes provisions for warning of approach and for stopping on signal by a person in charge of a restive or frightened animal as long as shall be reasonably necessary to prevent accident and insure the safety of others.

When Charles Thaddeus Terry, counsel of the American Automobile Association, was questioned by a representative of the Motor World as to the possible result of the park board's opposition, he replied:

"The stand taken by the park board is too absurd to merit serious consideration. It is the stand they have taken before and been defeated in. All fair minded people, whether automobilists or not, realize how absolutely untenable the board's attitude is. If each little local organization throughout the State is to have the power to make laws and ordinances governing the traffic of their respective balliwicks, no man could drive fifty miles without violating a law, some law that he never heard of and couldn't easily find out about."

There was a tone of disgust in Mr. Terry's voice as he continued: "Two or three years ago, it will be remembered, the park board adopted a rule forbidding automobiles to use the parks at all. The public clamor that immediately arose compelled them to rescind their action. The legislature is familiar with the methods and ideas of the park board and I greatly doubt if their opposition in this matter will accomplish anything."

When his attention was called to the Voss bill Mr. Terry said that it was a negligible quantity, it had been introduced too late to be passed, and was fathered by some one or some organization at present undiscovered.

Whistles to Halt Motorists in Newark.

A new regulation concerning mounted policemen and automobilists has been put into effect by the Newark (N. J.) Police Board. It is worth memorizing, for a knowledge of it may save fines and unnecessary police annoyance. Hereafter, instead of shouting at automobilists who they consider are going faster than the prescribed limits, the mounted policeman will use whistles. Automobilists are expected to stop or slow down their cars whenever they hear the signal.

Buffalo Adopts Drip Pan Ordinance.

The city of Buffalo has passed an ordinance requiring automobile owners to put drip pans on their automobiles. Owners whose automobiles drip oil on the streets are liable to a fine of $50.

Minneapolis has a new automobile ordinance which includes a provision that automobiles shall not be kept standing on the business streets for a longer time that 20 minutes.

GOOD ROADS GOSPEL FOR GRANGERS

Automobile Club Offers Helpful Suggestions in a Booklet—The Damage that is Done by Water.

There are several ways of viewing the cause of good roads and several ways of treating the country-dwellers who chiefly are responsible for the well or ill conditioned state of the highways. To return hostility for their hostile or non-cimmital attitude is natural enough, but the friendly policy is better, especially where is is accompanied by direct tender of good advice and aid on the part of the motorists who always appreciate good roads, and who sometimes are held responsible to a certain extent for their destruction. This plan has been adopted by the Lima (Ohio) Automobile Club and a few helpful suggestions given to the farmers in a little brochure on road etiquette which is has issued.

"The most deadly enemy to good roads is water," is one of the points brought out. "Try and keep in mind this one fundamental thought, that water does more damage to roads than all other agencies put together. If it were not for water a road once good would always be good. Think about this every time you drive over a road. Speak about it to everybody you meet. Keep insisting that more attention be given to the subject of keeping water from standing in puddles along the road. It stands in pools only when there are holes for it to go into. No holes no water. No water, no mud. One shovelful of gravel will fill a small hole, and if all the small holes are kept filled, there will never be any large holes.

"You can fill a thousand small holes for what it will cost to fill ten large ones. In one case you will have a perfect road all the time. In the other case you never have a good one. It is either holes or fresh stone the year round. But after a road has been properly built it is an easy matter to keep it so by watching for the small depressions which always apppear in a new road, where little pools of water will accumulate after a rain. They look so very innocent and harmless at first; but the enemy—water—is there and at work. It softens the ground and along comes a loaded team and forces out the water and some dirt with it—just a little—but the depression is made a little deeper, and will hold a little more water than before; and the big wagon comes along and again 'swishes' out more dirt with the water than it did the first time.

"Wherever a drain-tile has been laid across a road you will always find a raise or a hole, even though it has been in for two or three years. Everybody sees it and takes the 'jolt,' but nobody fixes it, although it might be done in ten minutes, simply because it is nobody's business."

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GASOLENE VS. ALCOHOL AS FUEL

Experiments at Franklin Factory Result in Verdict for the Former—Relative Economy a Decisive Factor.

As the result of extensive experiments that have been carried on with the alcohol motor in the laboratories at the Franklin factory in Syracuse, N. Y., the Franklin people conclude that the results do not warrant the belief that there will be an immediate demand for the alcohol motor. They say their experiments show that even if alcohol and gasolene could be purchased at the same price per gallon, the gasolene motor would be the more economical. In other words, with the two fuels at the same price, it would be cheaper to use gasolene. This is because there is a great deal more energy in a given amount of gasolene than there is in a given amount of alcohol, and up to date there is no way known by which the handicap of an alcohol motor can be overcome.

There is another very serious drawback to the use of alcohol as against the use of gasolene, they say. The motor can use practically any amount and not suffer. In the gasolene motor the "mixture" must be right or the motor does not work well. If the gasolene is used too freely and the "mixture" becomes too rich the operator knows it at once by the loss of power, etc. This is not true with alcohol. For example: If the alcohol motor was running at the rate of three miles to one gallon of alcohol and some little change in the adjustment or conditions caused the alcohol to be fed faster, the motor might consume a gallon to a mile and the operator would not know it. Therefore, under all conditions known to-day the Franklin people conclude that there is no immediate future for the alcohol motor, but they do believe that it is of sufficient importance to merit further experimenting with the possibility that the problem of providing an available substitute for gasolene as fuel for the internal combustion motor can finally be solved.

Necessity for Ample Room for Testing.

When first testing the results of adjustments which have been made on the clutch or transmission it is advisable to have plenty of room for operation before connecting the transmission to the power plant. An incident recently occurred which emphasizes the importance of this precaution and which narrowly escaped a sensational climax.

A car equipped with a planetary transmission was given a thorough overhauling. The last thing to be adjusted was the transmission, and when this was done the engine was started and the mechanic, who had seated himself in the car, threw in the clutch. It held all right, but instead of taking hold gradually and permitting the car to slowly overcome its inertia, the vehicle bounded forward with startling suddenness, and with disastrous results.

The test was made on the upper floor of the garage which was equipped as a machine shop. The car was standing directly in front of and only about three feet away from a drill press, and as it bounded forward it struck the latter with sufficient force to wreck it, at the same time destroying its own radiator, which received the full force of the impact. The mechanic was fortunate, however, in having the car stopped by the drill press, for that alone was between the car and a large window that extended from the ceiling to the floor. Had the press not been there the car would have gone through the window and dropped 20 feet to the ground. Obviously had this occurred the incident would have had a tragic ending. But the accident would have been avoided if the simple precaution of having plenty of room for testing had been taken.

Selecting the Proper Spark Plug.

While the same principle is found in all spark plugs, it does not follow that all plugs are equally desirable for all motors. The selection of the style of plug which is best suited for a certain cylinder should depend almost entirely on the construction of the cylinder in which it is to be used. The best results will be obtained from a plug the firing points of which are well down in the explosion chamber.

As some motors are constructed with a large amount of metal in the cylinder head or an especially generous water jacket, it is obvious that plugs with short bases will not enter well into the explosion chamber. But as most manufacturers of spark plugs make a variety of designs it usually is possible to obtain the style wanted in whatever make of plug the consumer is best satisfied with.

Commutator Trouble and Its Remedy.

A source of trouble that is difficult to locate is sometimes found in the commutator. When the firing in a cylinder becomes erratic, the cause of it may lie in the condition of the springs behind the commutator brushes. After the brushes have been worn down by long usage it often will be discovered that the springs which are necessary to cause the contact between the brushes and the armature are not long enough to serve this purpose, with the result that a good contact is not made when the armature is revolving rapidly. Yet when a test is made with the engine not in motion the results are entirely satisfactory.

No definite rule can be laid down that will show when this condition exists, but if all the other parts of the ignition apparatus are in order, time and trouble may be saved by lengthening the springs so that a firm contact is secured.

HARMLESSNESS OF BATTERY FLUID

Startling Ablutions in Presence of Supreme Court Convince Jurors—Verdict for Defendants in Damage Suit.

By plunging their hands in the dilute solution of sulphuric acid which is used in the batteries that drive motor cabs, and by rubbing that fluid upon their faces, William H. Palmer, Jr., secretary of the New York Transportation Co., and Mr. Wing, counsel for the company, disproved in the New York Supreme Court a few days ago, the general impression that battery fluid is strong enough to burn and disfigure the human body.

This somewhat spectacular demonstration was made during the trial of a damage suit brought against the New York Transportation Co. by a boy who had been caught in a collision between a street car and one of the company's electric cabs. The force of the collision had knocked the batteries from the cab and broke them. The boy's lawyer claimed that his client had been knocked down and had rolled in the puddle of electrolyte fluid which had formed after the breaking of the batteries. He claimed, further, that the electrolyte had burned the boy so severely on the head and face that the burns had not healed for six months after the accident occurred.

As soon as this allegation was made, both Mr. Wing and Mr. Palmer jumped to their feet and volunteered to wash their hands in the same kind of acid which the plaintiff's lawyer claimed had burned the boy. They also agreed to have it rubbed on their faces. The boy's lawyer dared them to carry out the proposed demonstration, and with a readiness that probably was wholly unexpected by the challenger they accepted his challenge.

With the consent of the judge, a battery of the same type used on the electric vehicle which had been in the collision was then brought in the court room, and the acid emptied from it into a basin.

Mr. Wing and Mr. Palmer then washed their hands in the electrolyte fluid and rubbed a generous quantity of it on their faces. Mr. Wing, to further prove the harmlessness of the fluid, actually swallowed some of it.

The jury was apparently so well satisfied with this demonstration of the inability of electrolyte to inflict the injuries which the plaintiff's lawyer alleged that it brought in a verdict for the company after being out only fifteen minutes.

It was brought out in court that electrolyte is a dilute solution of sulphuric acid in water, and is perfectly harmless so far as any burning effect upon the human body is concerned, unless copious quantities of it be permitted to remain upon the body for a considerable length of time.

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EXPENSES OF COMMERCIAL CARS

Comparative Statistics of Operating Cost in Scheduled Service—Their Bearing on Systems of Propulsion.

In this country the operation of motor vehicles for commercial purposes has been carried on in such a desultory fashion up to this time that but little is known of the proper average working costs as credited to the finer subdivisions of the sum total. In England and on the Continent, on the other hand, three or four years of continuous operation of omnibuses and trucks by companies handling relatively large numbers of these vehicles, has furnished a broad basis of cost accounting and cost comparison, which is of the greatest value to those who have access to them.

According to good authority, the outcome of a prolonged and careful study of such statistics has led to the disheartening conclusion that the systems of propulsion in present use are, for the most part of too expensive a sort to be worked with proper economy. In other words, according to this opinion, "It is necessary that an entirely different type of vehicle to those now most generally used must be introduced," in order to secure the proper ratio of net earning to investment.

This opinion—and in the light of the conclusions offered it cannot be regarded otherwise—formed the gist of a paper on the "development of petrol-electric systems and their application to heavy road vehicles," read before the Society of Road Traction Engineers, recently by P. Frost-Smith and W. A. Stevens. Though bearing directly on the use of the "mixed" system of propulsion, or the electric transmission, as it is more aptly termed, the treatment of the subject has a general bearing on the use of commercial vehicles in scheduled service in England, which is of no little interest from the statistical point of view.

Referring to the results of long-continued observation the authors remark that "the general cost of running is much too high, . . . and this high cost of operation is due to several causes, including abuse of the vehicle by reason of bad driving and carelessness, and the necessity for a very heavy night staff—about 1.5 men per vehicle, excluding washers. The only items in which economy can be effected in motor 'bus operation are: depreciation, running costs, maintenance costs, oil and grease."

The costs per mile quoted are derived from the experience of the company with which the authors are connected, and are claimed to be representative of average London practice. "They relate," it is explained, "to vehicles which have been in operation for nearly 3 years, and they therefore give a fair indication of the maintenance necessary after the first year's working." The figures are given in American equivalents:

	Cents.
Day running	0.54
Night running	1.52
Maintenance	4.96
Lubricants	0.49
Grease	0.16
Paraffin (kerosene)	0.08
Vehicle lighting	0.21
Body upkeep	0.51
Drivers	2.66
Tires	3.55
Conductors	1.92
Petrol (gasolene)	2.69
Traffic expenses	0.52
Depreciation, insurance, rents, taxes, water, gas, garage lighting, supervision and establishment charges..	4.43
	24.24

"The petrol-electric problem has, for some years past, received much attention and careful consideration," the authors continue, "and many designers' names here deserve mention, viz., Patten, of America, in 1890; the Germain system in Belgium; the Hart direct-current system, in 1903; the Fischer, in America; the Lohner-Porsche, in Austria; the Stevens double-ended motor; the Carolan; the Krieger, Pieper, Farrow, Mercedes-Simplex, Kuttner, Lehwess and Clark, British Thompson-Houston, Greenwood and Batley, and last, but not least, the Hart and Durtnall, all of which types differ considerably in their application and other details, to the system in which we are interested.

"We can only deal generally, and briefly with the foregoing systems, which are broadly divided under three headings, viz., the accumulator system, the direct-current system, and the alternating-current system. The prospects, we think, are of the worst for those interested in the accumulator system, by which we mean a motor or motors driven from a storage battery which is carried upon the vehicle. Traction battery sets have never yet met with success, and it is only necessary to look into the records of the Blackpool Tramways Co., the Birmingham Central Tramways Co., the London Motor Cab Co., and early American efforts in this direction, to condemn the system. Accumulators of the Planté type were as efficient 15 years ago as they are to-day, and the only improvements shown are in mechanical details. We are of opinion that for the systems which employ a direct current unit, in conjunction with secondary batteries, the prospects are also bad, chiefly on account of the heavy wear and tear on the battery. As regards the purely petrol-electric combination, we are of opinion that the electric unit applied heretofore, by a double reduction gear, or by single motor on to a live axle, or to replace only the gear box, and used only as a starter, does not warrant its existence. The Mercedes-Simplex system, which is a direct application of electric motors, built into the road wheels, appears to us to be entirely wrong owing to the very low speed, the limited size of the motors, and the necessarily low efficiency. We have mentioned the Mercedes-Simplex system last, as the object they aim at is in our opinion, the correct one, viz., the direct application of the electric motors to the road wheels, but still, this must be done in a manner that shall be mechanical and efficient; this we have endeavored to do, and we hope successfully."

The Hallford system, which is discussed at some length in the text, was described in these columns not long ago. Its most striking feature from the purely mechanical point of view, is the method of mounting the motors, of which there are two, which consists in hanging them upon the outside of the frame at either side of the vehicle, and driving the rear wheels independently through special cardan shaft and bevel gear groups. Speed control of the vehicle is accomplished mainly by altering the excitation of the dynamo, so that variations in traction are secured with a minimum waste of energy.

This system has proved conducive to a number of economies, of which the paper continues:

"An engine such as we have employed may be safely taken to cost no more than ¼d. (½ cent) per mile, on the very low basis of 30,000 miles run per annum; this mileage is more likely to approach 40,000 miles than the figure given, and at the time of writing this paper the engine has cost nothing.

"On the same basis as the above the frame is estimated to cost ¼d., and the back axle the same sum. This latter unit was stripped after a 6,000 mile run, for examination, and we wish you to accept our assurance that there was no visible signs of wear. Gears, ball bearings, and other wearing parts were perfect, and the only anxiety we have regarding this unit is the possible carelessness, or want of attention. on the part of the management, or other employes. The electrical unit has shown us that with a suitably designed dynamo and motors, the maintenance cost would be extremely low, and certainly not more than ¼d. per mile, though we really think that this figure, low as it is, would eventually be considerably reduced."

The saving possible with a vehicle of this description is revealed by the following table, which is quoted in American coin:

	Cents.	Cents.
Depreciation, insurance, etc...	4.43	3.66
Day and night running charges.	2.06	0.69
Maintenance	4.96	2.03
Lubricating oil	0.49	0.12
Grease	0.16	0.04
Paraffin (kerosene)	0.08	0.04
Other items (same as now) ..	12.05	12.05
Total	24.24	18.63

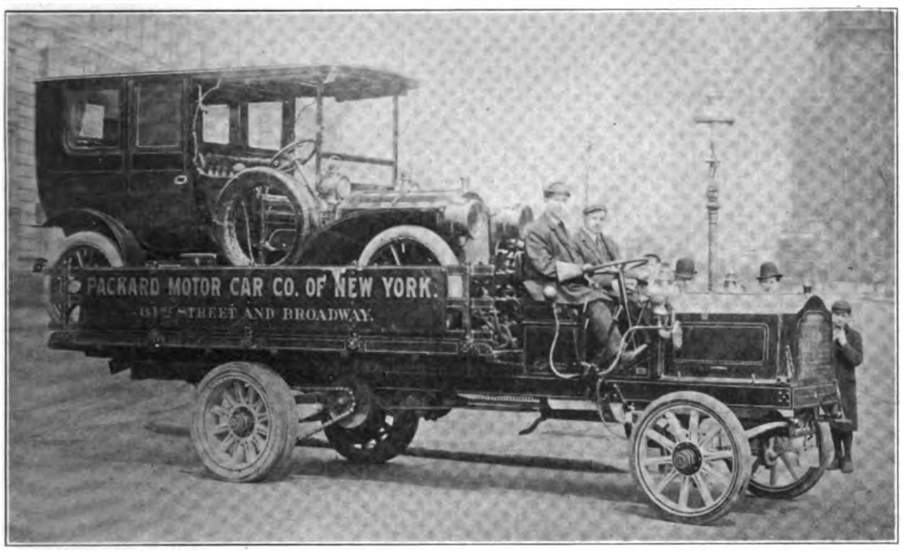
This constitutes an apparent saving in operating expenses of some 23 per cent., which, coupled with its reliability of action, constitutes a telling recommendation for the system.

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PACKARD IDEAS IN A NEW TRUCK

Approved Features of Touring Car Construction Adapted to Heavy Vehicles —Simple Details of the Chassis.

Although it is admittedly "bad practice" to utilize parts intended for use in pleasure cars in vehicles answering to purely commercial requirements, there is a world of good sense in applying the ideas which have been worked out successfully in one class of machines, to those of the other sort so long as they are properly adapted. Thus in the new Packard three-ton truck, which is being introduced by the Packard Motor Car Co., Detroit, Mich., a form of counter shaft is employed which closely parallels the rear axle "bridge" construction combined with the change gear arrangement, which has for so long been a marked and approved feature of Packard touring car construction. This form is carried out even to the extent of taking up the driving resistances by means of a long torque rod, instead of by the lugs supporting the gear box, as is more commonly done under similar conditions.



PACKARD THREE-TON TRUCK

The details of the machine have been worked out with great care and show the effect of the long period of incubation which has preluded its introduction. Its general arrangement is characteristically simple and in accordance with current practice, many of the refinements not ordinarily found in commercial vehicles being apparent in its make-up. The loading platform is 6 feet by 12 feet 4 inches, thus giving 74 square feet net of useful space back of the driver's seat. The floor is 41½ inches above the ground, and in the standard construction is supplied with a regular crib body. Other types of body are equally applicable, however, and are obtainable on special requisition.

The chassis, which weighs about 5,000 pounds, is geared to run at speeds up to 12 miles an hour. It has 144-inch wheel base; 68-inch tread; wheels, 34 and 36 inches in diameter, front and rear, shod with solid tires, which are single in front, and twin in the rear. Semi-elliptical springs are used—45 and 50 inches long, respectively, and of massive form. The main frame is 39 inches in width and 148 inches long back of the driver's seat. It is built up of channel steel with cold riveted joints.

The motor, which is located under a shapely bonnet in front of the seat, is of the quadruple, vertical pattern, with cylinders cast in pairs and with water jackets integral. Its dimensions are 4½ by 5 inches, bore and stroke. The regular Packard type, automatic carburetter is employed, and governed automatically. Ignition is by jump spark, furnished by the Eisemann magneto, gear driven, supplemented by storage batteries for reserve and starting purposes.

Transmission is by propeller shaft from the expanding ring clutch to the three speed sliding change gear, and from the counter shaft to the wheels, by side chains. The foot brakes are applied on large drums located on the counter shaft ends, just inside the driving sprockets, while the emergency set acts on the wheels themselves through internal drums. The mechanism of control comprises the usual pedal and lever appliances, and is handily placed on the right side of the vehicle.

Parcels Delivery Experiment in Mexico.

What is considered a significant beginning in the exploitation of the commercial motor vehicle in Mexico was inaugurated the first of this month, when the Mexican Railroad undertook a series of trials to determine the relative costs of parcels delivery by motor and animal traction. The initial equipment consists of a single 22 horsepower British built machine, imported for the purpose.

GAS PRODUCER FOR MOTOR CARS

Practical Experiment in Fuel Production for Heavy Vehicles—Specifications of a Recent Foreign Device.

What used to be regarded as a more or less remote possibility in connection with motor propulsion, has been brought into a state of tangible reality by a Scotch firm which has developed a form of gas producer suitable for use on motor vehicles of the heavier class. While the direct utilization of producer gas in motors of the internal combustion type is known to be more economical than the use of liquid fuels, the stumbling block has always been the cumbersome nature of the producer itself, which in point of bulk and weight tended to parallel the ordinary steam boiler. The special type of producer which has been developed by the firm in question, the Automobile Gas Producer Syndicate, of Glasgow, is surprisingly light and compact, and as applied to a machine of the char-a-banc type, equivalent to the American "rubber-neck wagon," has proved even more satisfactory than had been expected at the outset.

According to the Scientific American, in which an account of the trials recently appeared, the vehicle closely resembles the sight seeing and transfer machines which are extensively used in Great Britain at the present time. The motor is of the ordinary gasolene type, and develops 40 horsepower when run on gasolene, and 30 when run on producer gas. It is placed in the usual forward position underneath the bonnet and is unaltered except that the compression is raised to 115 pounds. The normal running speed is 900 revolutions per minute, and transmission to the rear driving wheels is by the ordinary form of change speed gear and double side chains.

"The gas producer is placed immediately behind the engine, between the latter and the dashboard," says the authority mentioned. "It extends the full width of the chassis, and is about 18 inches deep, while it extends from just below the top level of the dashboard to within about 12 inches of the ground. The grate area is about 12 square inches, and the fuel rests on a specially designed grid, upon which the water is sprayed in the center through a four-spray nozzle.

"On a level with the fuel grid is a small air-tight door secured in position by means of a crossbar and clamping screw, by means of which the fire is lighted and the clinker and ash removed. The upper part of the producer, which forms practically an integral part thereof, is occupied by the fuel hopper. This is charged through small openings in the top rendered air tight by means of special cone joints, it only being necessary to open these once a day—in the

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morning before starting out—since a single charge is sufficient for a full day's work. The air blast is forced into the bottom of the producer by means of a powerful rotary blower driven by chain from the engine shaft, while it is also fitted with a hand-operating device for the purpose of setting the fire going after lighting. In order to control the generation of the gas, as well as to reduce the temperature and dispense with the steam jet that is generally utilized in such plants for this purpose, variation in the quantity of fine pulverized water fed through the nozzle mentioned above is effected by a special pump. This is accomplished by an ingenious arrangement. There is a novel rotary plunger pump fitted and driven from the engine by a lay shaft, by which the water is forced from the tank into the center of the fire. This pump works automatically and has the most delicate adjustment, so that the temperature of the fire and the extent of the gasification is carried out according to the requirements of the engine independently of the driver, the pump practically fulfilling the function of a governor. . . . .

"From the producer bottom the gas escapes into a pipe conveying it downward through the hopper to a coke scrubber suspended beneath the frame of the vehicle; thence it passes through a second pipe into the mixing chamber, where it is mixed with the right proportion of air for combustion, the entry of the air being controlled through adjustable cocks, one of which is carried to the dashboard, so that the driver can supplement or decrease the air supply for this purpose. Thence the mixture passes to the throttle valve, controlled from the steering column, from which it is induced into the combustion heads of the engine cylinders through the inlet valves."

The vehicle is controlled in the ordinary manner, the generation of gas being carried on automatically except for the injection of water into the producer, which is regulated by a small hand lever mounted on the steering column beside the spark and throttle levers. The hopper has a capacity for 640 pounds of fuel, and the fire is started with about 3 pounds of charcoal. Within 5 minutes of the time of starting the fire, the car is ready to use and thereafter no further attention need be given the producer.

After a year's use, the vehicle was recently subjected to a series of exhaustive tests to determine its economy and study the possibility of improving certain details of construction. In these trials, anthracite "pearls" were substituted for the coke, which had been the fuel originally intended, and with perfectly satisfactory results.

"The distance covered upon the latest of these tests," to continue the quotation, "was 40 miles, at an average speed of from 10 to 11 miles per hour. For the run 145 pounds of fuel were used, the vehicle weighing with its passengers 4.9 tons. This represents a fuel consumption of approximately 0.74 pound of anthracite per ton mile. The coal cost $3.54 per ton, so that the fuel running costs represented about 0.12 cents per ton mile, or about 24 cents for the 40-mile journey.

"The same vehicle working under precisely similar conditions with gasolene fuel cost about 1.34 cents per ton mile, the spirit at the time costing 28 cents per gallon. Under these circumstances it will be realized that running expenses with producer gas are considerably lower than with gasolene, in this instance a saving of 1.22 cents per ton-mile being effected. It must be pointed out, moreover, that the working conditions were not the most favorable to economical efficiency, since no modification was made in the movement or diameter of the inlet valves, which were of the type usually adopted in general motor practice. More satisfactory and economical consumption results would be available were the valves mechanically operated, and with about twice the inlet area to the explosion chamber. At the same time the results have been sufficiently conclusive to prove the suitability of the system to all-round automobile work, and various vehicles of this type are now in course of construction."

Gun to Indicate Deflation of Tire.

Of all devices ever invented for the purpose of warning the automobile driver of the presence of a deflated tire, none, perhaps exceeds in point of simple ingenuity the contrivance recently placed on the French market by Loitard Freres, a Parisian firm. Briefly it is nothing more nor less than a tiny alarm gun affixed to the rim of the wheel, and arranged to be fired automatically when the tire pressure falls below a certain predetermined amount.

A tube, not unlike the filling tube, is mounted in the rim, and carries at its outer end a small metallic cartridge held in place by means of a screw cap. A small chamber just back of this contains the firing pin, which is spring actuated, and held in the "cocked" position by an extension in the form of a slotted tube, which engages a groove in the edge of the rim, where it is clamped in place by a small plug mounted on a butterfly flap, similar to those carried by the ordinary security bolts. So soon as the tire pressure falls to the danger point, the force holding the plug in place is relaxed sufficiently to release the firing pin and explode the powder charge contained in the cartridge, thus giving effective warning of the deflation.

Steering Gear at Top of Control Column.

To all intents and purposes there should be no advantage in placing the steering gear at the head of the control column instead of at the foot as is customarily done. The designer of the Critchley Norris steam car—a British product—however, has found several points in favor of the arrangement which has been incorporated on these machines in a particularly novel manner. The gear itself is of the worm and nut type, the slide which is threaded internally to receive the steering post, being mounted in the housing of the column directly beneath the wheel. Attached to it by means of a gudgeon pin is a long connecting link, extending through to the base of the column and there attached to one arm of a bell-crank lever, the other extremity of which is linked to the right hand steering knuckle by means of the usual drag link. The most striking feature of the system is that the entire gear may be dismounted without disturbing the dash or its supports in any way and even without dismounting the column.

Making Putty Hold in Body Finish.

At first thought it would appear quite as easy to putty the surface of a motor car body and make the plastic material stay in place as it is to perform the same service for the ordinary carriage. Such is not the case however, and the problem is a far more difficult one than would appear to be the case.

"Vehicle painters," remarked a practical member of the craft, "have long recognized the difficulty of making putty stay securely in place upon surfaces exposed to severe forms of vibration, and they resort to various expedients to circumvent the dislodging power of the oscillation and vibration incident to the use of such surfaces. As a rule, the automobile is subjected to a service that tries the surface at all points, and to an extent foreign to the service of horse-propelled vehicles. To make the putty stay in place better upon such surfaces is the painter's burden to-day. Not a few workmen have succeeded in overcoming the difficulty in using a little raw linseed oil, say, a gill to four pounds of putty, in the putty as it is mixed. This serves to impart additional binding power to the putty, and, given a little extra time in which to dry, the pigment is pretty certain to hold."

Suspension with Cushioned Springs.

Under the name of the Simplex shock absorber, a British firm has just introduced a system of suspension which follows remarkably close in the footsteps of an Amerilan invention of several years ago, in which the springs were supported on pneumatic cushions fixed to the axle perches. In the Simplex system the springs are seated on a rectangular, gun-metal box which has a loosely fitting bottom or piston, carried by the axle and fixed rigidly in place. Between the piston and the shell of the box is a rubber bag of substantially the same section and contour, which is inflated to a pressure of some 10 to 15 pounds. Unlike the device referred to, however, this arrangement is not intended to eliminate the use of inflated tires, but merely serves the purpose of relieving the springs themselves of the minor shocks and vibration of the vehicle. In this sense, it acts as a shock absorber, literally, and supplements the action of the tires.

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HYDRAULIC CLUTCH DEVELOPMENT

Two Novel Methods of Attack—How the Same Result May be Attained in Various Ways.

Despite a number of very attractive features, the hydraulic clutch still remains largely a matter of prospect. Numerous different patterns have been designed, and from time to time no small amount of attention has been called to the subject, particularly in the columns of the foreign press. Nevertheless, up to this time no type of hydraulic transmission, either clutch pure and simple, or clutch and change speed gear, has been developed to a point where the public has had opportunity to test its qualities. At the same time, a great amount of labor is being expended in working out the system, which is too important to be overlooked.

One of the most recent developments of this class is the invention of Professor Hele-Shaw, whose multiple-disc clutch is famous as the prototype of its class. It is built on the plunger principle, that is to say, both driving and driven elements are composed of batteries of four small cylinders, arranged radially about the common axis of the clutch and carrying plungers from one to the other series of which motion is transmitted by the working fluid. Variations in the driving ratio from one to zero up to one to one, are obtained by varying the length of stroke of the plungers in the driving member. Furthermore, as this variation may be made smoothly and through stages of any desired length, it follows that the speed control of the vehicle may be as even and gradual as is desired.

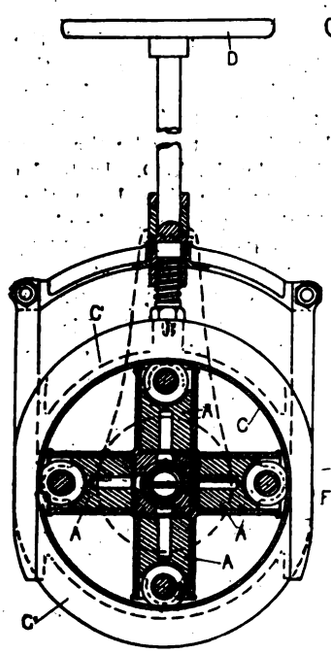


Fig 1.

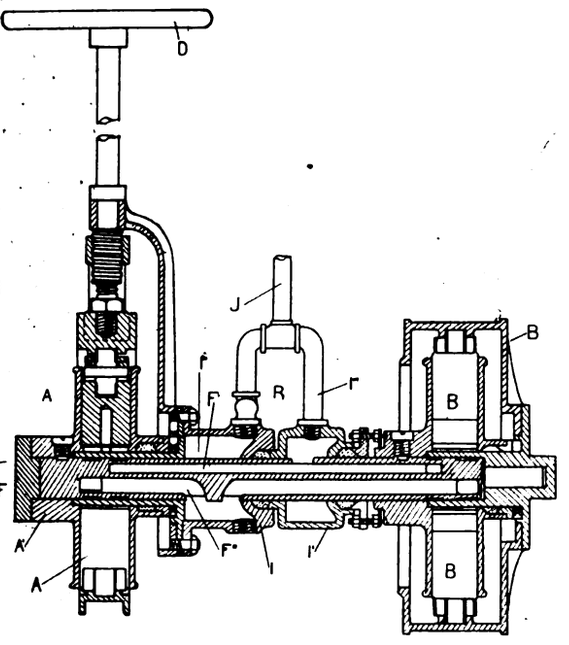


Fig 2

The details of construction of the Hele-Shaw clutch are shown in Figs. 1 and 2 accompanying. As is apparent, the small plungers, A', in the cylinders, A, are arranged to travel back and forth along the diameters of the clutch, and are constrained in their motion by the guide ring, C, against the inside of which small rollers mounted on the outer ends of the plungers bear. The guide ring is composed of two semi-circular yokes with tangential extensions, which may be moved together or apart by means of the controller, D. As this is turned, the screw and nut mechanism above the clutch proper causes the yoke C' to move up and the yoke C" to move down, or vice versa, the effect being to transform the yoke into an ellipse of varying length, according to the position of the controller. When the yoke is in the position shown in the illustration, the path of the rollers is perfectly circular, and therefore, if the shaft on which the cylinders, A, are mounted is caused to revolve, the plungers will not move, but will be held stationary. In the other extreme positions of the yokes, the plungers will be given their full travel, and will make four strokes per revolution.

The plungers B', in the driven group, shown in Fig. 2, are similarly arranged, but the rollors mounted on their plungers are constrained to run upon a path in the driven drum, B, which is permanently elliptical. Connecting the first and second groups of cylinders are a series of passages formed in the hollow driving shaft through which the working fluid is passed back and forth. From the plungers A, it is sent through the port F", direct to the driven cylinders, to which it is admitted through ports in a rotary valve made integral with the part B. It is afterward returned through the low pressure port F' to the driving cylinders again, thus completing its circuit. Two chambers are provided in the surrounding casings, I, I', the first, leading from the high pressure side of the system through a safety valve, R, to the supply reservoir, J, while the second is in communication with the same source through the pipe, I"'.

In action, with the driving pistons constrained to remain at the heads of their respective cylinders, as shown in Fig. 1, the system will be completely filled with a solid column of liquid, which, being incompressible, constrains the parts comprising the two groups of pistons to rotate together. When power is applied at the point, F, this constitutes a "direct drive" up to the point where the secondary pistons make contact with the track in the drum, B. This path being elliptical, and the driven pistons being immovable, it follows that the drum, B, and so the secondary shaft of the transmission, will also be driven at the same rate of speed as the primary. By varying the position of the yokes, C'-C", the driving pistons are given a greater or less amount of travel, thus permitting the liquid to circulate and give a corresponding motion to the secondary pistons, thus retarding the speed of the driven shaft, up to the point of full stroke in the driving group, when the circulation of liquid is so rapid as to permit the secondary shaft to remain absolutely idle.

Another recent device, which is interesting in this connection as typifying the rotary type of clutch movement as distinguished from the reciprocating, is that shown in Figs. 3 and 4, which illustrate the design of William Watson, another British engineer. In this, the principle employed is that of the vane pump, the driving and drivtn elements again being quite independent of one another, though very compactly arranged.

Referring to Fig. 3, A, is the driving shaft, B, a sleeve surrounding it, and D, three sliding keys which work against as many projections, E. At F are three cam surfaces, which work against the blades, G, which, in turn, slide in channels formed in the driving element, and are held outward normally by springs. Fixed to the sliding keys, is a collar, K, (Fig. 4), which is grooved to receive a piece, M, actuated from the outside by the rod, N, when it is desired to alter the control of the device. Working the rod, moves the collar, K, and, by moving the sliding keys, D, by engaging the projections, E, rotates the sleeve, B, sufficiently to cause the cam fingers, F, to withdraw the blades, G, into the boss of the driving member. This causes the release of the clutch and renders the device idle.

The driven element consists of the annular casing, O, which is provided with a couple of grooves carrying the blades, Q, held outwardly by springs. The two pressure ports, S, lead from the annular space, U, between the driving and driven elements, to the space oueside the drum, O, while T,

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are the exhaust ports, leading around to the intake side of the driving element through ports in the ends of the casing. The outer casing, containing the last mentioned transfer ports, provides a series of smaller ports, 3, which serve to throttle the flow of liquid, and retard the circulation to any degree necessary.

Within the outer casing are placed three blocks, W, the inner surfaces of which are of the same radius as the driven element, O, and which are moveable radially through the mechanism, X, controlled by the shaft, 10, to vary the area of the annular space between the blocks and the driven element. It will be observed that the inner space, U, is divided into two sections by abutments, and the outer into

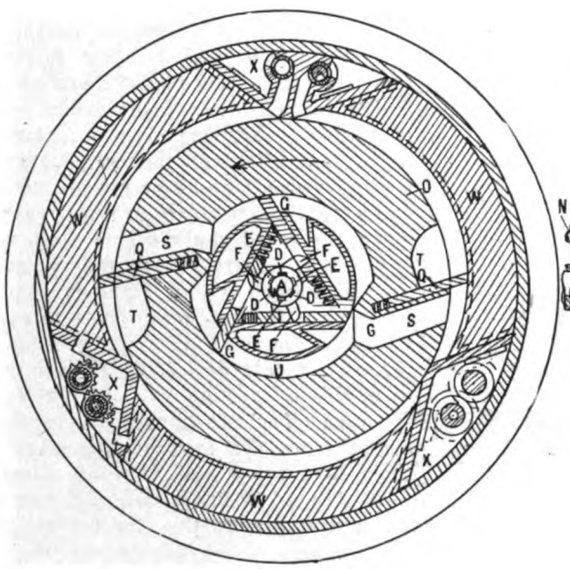


Fig 3

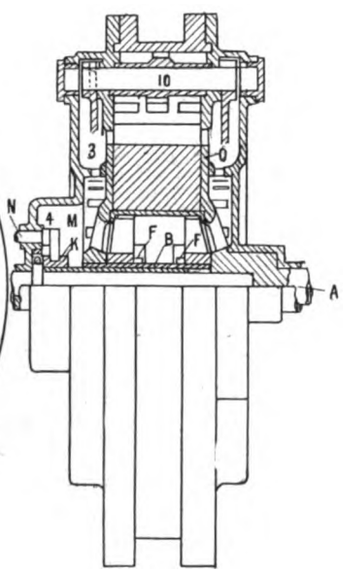


Fig 4

three by the guides which locate the position of the sliding blocks, W.

As the driving element is turned in the direction of the arrow, the blades in the driving member force the liquid out through the pressure ports, S, into the outer space, the pressure thus formed reacting against the abutments in the outer casing and serving to drive the blades, Q, in the same direction. The part O, being coupled to the driven shaft of the transmission, the connection is thus established through the system.

In order to increase the speed of the driven member, the blocks W, are brought inward by means of the gearing, so that the area of the outer annular passage is reduced. This, in turn, increases the velocity of flow in the liquid, and so increases the speed of the driven part, O, up to the maximum speed, when the blocks are in contact with the driven member, O, and the outer passage has entirely vanished. At this point, the parts become locked together and the entire mechanism revolves as a single part.

In all hydraulic clutches the gradation of speed is accomplished without interrupting the drive and without resorting to determinate "speeds." The control which this furnishes is so ideal in its nature that it is remarkable no more rapid progress is being made in developing the principle.

Block to Aid in Repair of Chains.

It is one of the simplest matters in the world to describe how readily a driving chain may be repaired at the roadside merely by cutting out a faulty link or two and replacing them by new ones which always are ready to hand in the tool kit. But drivers who have tried to follow directions in this respect have learned to their sorrow that owing to the great degree of hardness of the parts this simple little task proves to be a most provoking one to undertake. This is particularly true of roller chains.

The introduction of the Diamond Repair Block, which has just been placed on the market by the Diamond Chain & Mfg. Co., Akron, O., however, promises to put an end to all difficulties of the sort. In order to remove a link, it is merely necessary to place the chain in the block, slip on the top piece, give the rivet heads a few light taps with a hammer and lift off the side plate. The repair link may then be inserted and the entire task completed in a wonderfully brief space of time, all things considered. If it is desired to use the old link again, all that is required is to head over the rivets once more.

Annual French Test of Elastic Wheels.

Twenty-one contestants figured in the annual spring and elastic wheel and tire competition, which commenced on Tuesday, 7th inst., in Paris, under the auspices of one of the sporting dailies. The trial consisted of a run to Nice and return, totalling 2,100 kilometres or 1,300 miles in round numbers, with a two-day exhibition at Nice, and a one-day exhibition at Paris in conclusion. The daily schedules averaged from 200 to 326 kilometres per day (124 to 200 miles), and extended over eight days. The entrants were divided into five classifications, rated according to weight and cylinder bore, with a distinction according to the number of cylinders. Each class was further subdivided into two sections in which repairs to wheels or tires might or might not be effected during the trip, according to stipulation made in the entry blanks. A curious reflection on the unstable character of the resilient wheel propaganda appears in the fact that there were just twice as many entrants as starters.

Steering Reaches with Easy Adjustment.

Typical of the care with which the modern steering reaches and connections are worked out, is the method of adjustment found in the new set of connections which has just been brought out by the Long Arm System Co., Cleveland, O. Instead of employing a very fine thread on the plugs which hold the outer sockets in place, a relatively coarse thread is used, which, when tightly fitted, is much less subject to wear than is the case with a finer pitch. To facilitate adjustment, the plug is provided with three intersecting cotter pin slots across the outer end, while the shell of the bearing is drilled with two holes for the pin, placed at right angles to one another. By this means an adjustment of 1-12 turn, or 1-144 inch may be obtained, so that a proper working tension may be maintained at all times without difficulty.

The design also provides for hardened sockets, japanned, and therefore rustless springs, and heavy wrought iron piping for the body of the reach. The parts are supplied in sizes suitable for 1, 1⅛, and 1¼ inch balls, and in lengths as required.

Elastic Wheel Made in One Piece.

Almost everything in the way of an elastic wheel has been proposed before now, but the very latest idea in this line contemplates the perfectly novel use of a wheel made in one entire piece from "rubber, gutta-percha, or other elastic material," which is an innovation to which the Far East has lately given birth. The scheme has been made the subject of patent grants in the State of Perak, of the Federated Malay States, and is the invention of the manager of a local gutta-percha company.

Motor Cars for Factory Employes.

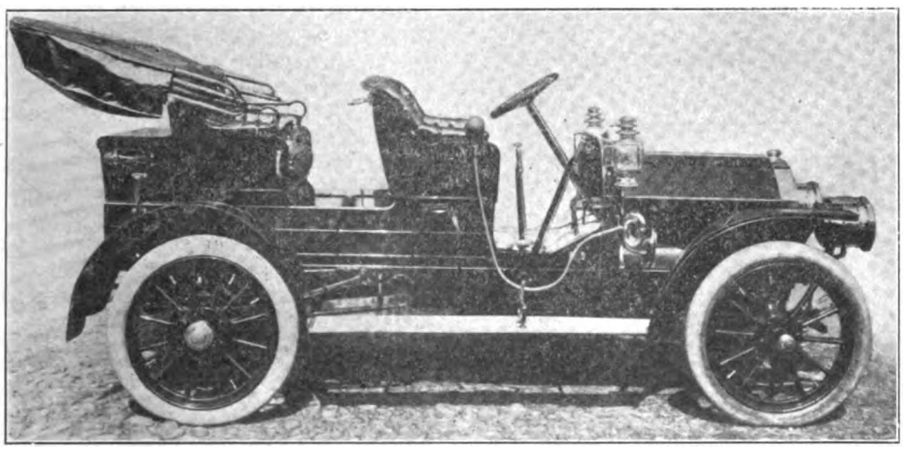
Motor vans for transporting factory hands between their homes and the shops where they are employed, constitute an unwontedly humanitarian innovation which is about to take place in the neighborhood of Moscow. Count Scheremetzew, who owns several sugar factories in that vicinity has just ordered three German motor vehicles which are to be used for this purpose.

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ROADSTER FOR THE SUBURBANITE

New Studebaker Model with Compromise Body of Original Design—Its Neat Feature of Adaptability.

As the average automobile owner is gaining in his appreciation of the motor car as a useful accessory to his daily life, the designer is gradually changing his plans with an eye to developing the widest possible utility in the product. This tendency is manifested in numerous instances among the new cars of this season, nowhere, perhaps, to better advantage than in the case of the new Studebaker Suburban Roadster. In common with a large number of machines of the runabout class, this machine has interchangeable rear seats, accommodating either one or two passengers, as the case may be, and readily demountable. Unlike the average, however, the removal of the seats leaves, not a flat or sloping deck, but a box body, suitable for carrying luggage or other light loads, and correspondingly convenient.



STUDEBAKER SUBURBAN ROADSTER

The accompanying picture gives a good idea of the appearance of the car, the equipment shown including the two-passenger rear seat, luggage rack behind, and cape top which may be raised to cover the entire vehicle. The body itself, follows the principle of the conventionalized Beverly wagon, which has been so popular among users of horse-drawn vehicles, and which comprises a moderately high box back of the front seat, set off in straight line panels. When the rear seat is removed, the tray or box is left open and perfectly free for haulage purposes.

The chassis is the regular model employed on all Studebaker cars this year, equipped with a 30 horsepower motor and sliding gear, shaft drive, transmission. The body may be used interchangeably with others, if required, and is intended to fill in the gap between the full blown touring car, which is fitted to replace, and the luggage or commercial van, which, though primarily intended only for tradesmen, is frequently required by the private owner for purely temporary uses.

Lubricating Gear Boxes and Axle Cases.

Owners are gradually learning to consult the maker, or agent, when purchasing a new car, in order to learn just how much oil is required in the crank case in order to secure proper lubrication, but they are slower in learning that it is almost, if not quite as important, that the proper quality and the proper amounts of lubricant be used in the gear box and live axle casing. Particularly in the case of the axle, it is important that lubrication should be plentiful and of the right sort, as the action of the differential involves great tendency to heating unless proper measures are taken to prevent it. When there is any doubt as to the proper quantity of oil to use, it is well to put in sufficient to work out under the brake drums at the end of the axle, afterward drawing it off a little at a time until this indication of a surplus is no longer apparent.

When cleaning out gear boxes and live axle casings, the quickest method of removing the oil and grease is to pour in a liberal quantity of kerosene oil, after draining off all lubricant that will flow, and then to jack up the rear end of the car and run the motor for a few moments, changing gear from time to time, so as to bring all the gears into play. After draining off the thickened solution which is thus formed, replace the drain plugs and pour in more kerosene, when the remnants of hardened grease may be loosened with an old paint brush, with which all the corners should be searched out. After draining a third time, new lubricant may be put in with good assurance that it will not be fouled with old oil or dirt. Such a cleaning requires only a comparatively small amount of time and labor, and should be resorted to at least two or three times a season. The fact that the gears will "run" by no means proves they do not require attention.

VARIED USES OF THE MANOMETER

Not Restricted to Its Ordinary Purpose—Conditions that may be Determined by Its Readings.

Though a considerable number of cars are equipped with manometers, or gauges indicating the pressure in the cooling system, it is safe to assume that only a comparatively limited number of users understand their full purpose, or know they are useful in a number of ways outside the very apparent one of indicating whether the pump is working or not. That their use may be extended considerably by gaining a thorough acquaintance with its working, must be apparent, however, on a moment's thought.

Primarily a pressure gauge, and as such, showing only, how much pressure exists in the piping of the cooling system, it is evident that fluctuations in its reading may be caused by one of four conditions. That is to say, the reading will vary as the engine speed, and so the speed of the pump varies; as the pressure in the system rises in response to stoppage of the flow at some point, the generation of steam in excessive amounts, or the breakage of a connection permitting sudden leakage; or as the speed of the pump falls off in the event of a fault in the driving connection.

Ordinarily, the indication of the needle furnishes an exact record of the speed of the crank shaft, and were the dial so graduated, would serve the purpose of a speed indicator perfectly well. Were the drive always in the same ratio, it would also serve as a speed indicator for the vehicle itself and record equally as well its rate of travel. The use of the change speed gear prevents this, ordinarily, but by the same token, the manometer serves a useful purpose in revealing the need of changing gears when road conditions become altered in any way. Thus, the motor invariably does its most effective work within a rather narrow speed range. If this is known, any dropping below that speed, may be taken as an indication that the motor is overloaded, and that, if suitable manipulation of spark and throttle levers fail to bring up the speed of the crank shaft, a lower gear should be resorted to in order to secure the smoothest possible running. In the same way, any undue "racing" of the engine, may be taken to indicate that a higher gear may be employed to advantage.

The experienced driver commonly relies on the sound of the exhaust or the beat of the valve gear to judge his handling of the motor, but with the silent operation of the modern car, it is not always possible to tell accurately just how easily the motor is pulling its load. Especially when driving through traffic the response of the car to clutch and motor control levers must be

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taken almost alone to show whether conditions are as favorable to the production of power as is possible. The manometer shows at once how fast the motor is running at all times, and so long as the driver carries a fairly good idea of what pressure reading should correspond to a given car speed, he can also tell whether the power is as great as it should be.

One Frequent Cause of Short Circuits.

Frequently batteries "run down" in a very short time. As frequently the battery is condemned, because the current was so quickly exhausted, when in fact the battery is not at all at fault, the cause lying in a short circuit somewhere in the wiring.

A common cause of short circuiting which yet is generally unsuspected, will be found in stray strands, of which most wires are built up, coming in contact with metal parts which should not be touched by the wire. Very often when placing the wire under a nut or around a stud, that is insulated from the rest of the metal, one or two of these minute strands will not be secured and shortly will vibrate or be jarred against the machine in such form as to permit of a continuous flow of the current. Obviously this contact will serve as an outlet for the current with the result that the batteries will soon become useless. If care is taken to properly secure the wire this battery complaint will be infrequent.

A quick way of testing a short circuit in the primary connections of the ordinary jump spark ignition system, is to apply a coltmeter across the terminals of the entire battery while the commutator is standing at one of its neutral points. After observing the reading of the instrument, throw the cut-out switch back and forth several times. If the circuit is perfectly insulated, there will be no difference in the reading under these circumstances. If there is a short-circuit or a ground, however, the needle will fluctuate, as the open circuit reading is always higher than that when the circuit is closed.

Replacing Core in Spark Plug.

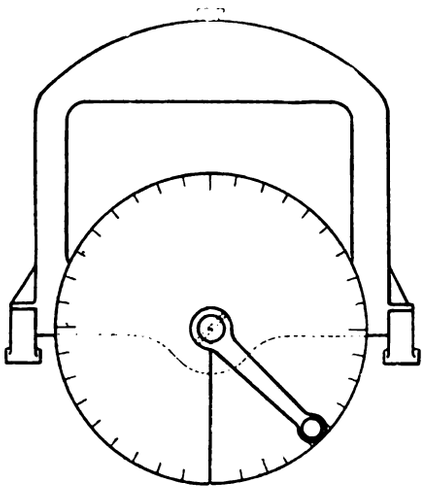
As nearly all manufacturers of porcelain spark plugs furnish extra porcelains for their product, it seldom is necessary to buy a new plug simply because the core of the old one has become useless. There is, however, a right and a wrong way of introducing the new porcelain into the old base.

When removing the bushing that holds the core in place, the simplest method is to hold the base or shell of the plug in a vise, then a wrench should be adjusted to fit perfectly the hexagon sides of the bushing. If this is done no damage will be inflicted on the bushing, but if the wrench does not fit and is permitted to "climb" the bushing, i. e., to hold only at the corners of it, the bushing is apt to be strained to such an extent that it will not fit evenly on the gasket with the consequent results of a compression leak.

METHOD FOR TIMING THE VALVES

How the Motorist can Make the Necessary Device—The Way in Which It Can be Employed.

Valve timing seldom falls to the lot of the everyday motorist. When it does, however, it is apt to prove more than puzzling unless certain systematic methods are followed. Most of the modern and up to date cars are furnished with guide marks on the motor fly wheel which are labelled to indicate the proper opening and closing points of the valves, as well as the proper sparking point for the igniters. Where this convenience is not provided, and, indeed, occasionally even where it is, the motorist



may be considerably aided by the use of a simple device in the shape of a graduated disc, which may be slipped over the starting crank and used for determining the angular position of the crank shaft at any time.

The device in question may be either a sheet of stiff cardboard, cut circular and with a hole in the center and a slit cut radially in it so that it may be put into place without removing the starting crank, or, where greater permanence is desired, it may consist of a sheet of good firm paper, carefully laid out in circumference and degrees, and afterward mounted on a sheet of tin and shellaced or varnished, to preserve it. In either case, it is put in place and held firmly against the radiator with the zero point carefully adjusted so that one edge of the starting crank exactly coincides with the proper line, when the piston of the first cylinder to fire is on its upper dead center.

Once this adjustment has been made, the timing may be adjusted exactly according to the requirements of the motor in degrees—if that happens to be known, or the distribution of the various cylinders may be compared with absolute accuracy. If the setting of the valves is known in terms of piston travel, rather than degrees of crank motion, for example, it is merely necessary to set the valves on one cylinder in this way. The others may be set to open and close in exactly the same time, by observing the degrees of crank motion, as recorded by the movement of the starting crank over the graduated scale, and jotting them down for reference, as the first cylinder is timed. Afterward, the same setting may be obtained for the other cylinders by using the scale as a guide, the only special requirement being that of turning the scale about in such a way that the starting crank always crosses the zero line just as the piston reaches the top of its stroke. The same effect may be secured by making proper allowance for the difference in degrees between the various cranks, adding the requisite number of degrees to the setting first employed, as the different cylinders are treated.

Another use of this device, which is emphasized by the Autocar, from which the accompanying illustration is taken, is that of adjusting the clearance of the valve lifters to absolute uniformity. The degree of clearance between the lifter and the end of the valve stem, obviously governs within narrow limits, the timing of the valve itself. That is to say, diminishing the clearance also causes the valve to open a trifle earlier than otherwise would be the case. On this account it is important that the clearance should be uniform for all the cylinders of a multi-cylinder motor. This, it would be, were the valve stems all of the same length, and the cams absolutely uniform. But in the case of old motors, where the cams may be unequally worn, the simple expedient of measuring the clearance by inserting several thicknesses of paper between lifter and stem, will not suffice.

With the arrangement indicated, it is possible to test the clearance with absolute accuracy by inserting a very thin piece of paper between the lifter and stem and turning the crank slowly, observing the points at which the paper is gripped and released again by the two parts. Obviously, the number of degrees during which the paper is held firmly, should be the same for all exhaust valves, and the same for all inlet valves. Variations may be eliminated by adjusting the tappet-screws, where such are provided, or by lengthening or shortening the length of the valve stems.

Demountable Live Axle in Special Form.

To obviate the drawback peculiar to certain forms of live axle whereby it is necessary to dismount the part from the chassis in order to dissect it, a French designer has devised a special form of demountable axle so constructed that the gears may be withdrawn without even removing the wheels. To effect this the differential gear is mounted on a short, removable counter shaft, which drives the axle stubs through spur gearing. The adoption of helicoidal teeth on these gears also permits the axle to be cambred without necessitating the use of universal joints or couplings.

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IN CLUBS AND ASSOCIATIONS

Big Club House Planned for Kansas City—New Organizations in Troy and Fort Smith—Annual Elections.

It was definitely decided by members of the Automobile Club of Kansas City at its last meeting to purchase a tract of land south of Kansas City and to build a club house. It is planned to have the club house at least 15 miles from the city and to get a plot large enough to include a garage, storage sheds and a field for outdoor sports. While no action was taken pending a decision as to the site, the members expressed themselves willing to expend $10,000 or more if necessary. A committee consisting of Dr. E. M. Hetherington, Amos Martin, Henry Fowler, A. J. Davies and Fred Heim was appointed to select a site and arrange building details.

Colonel Frank M. Joyce was unanimously re-elected president of the Minnesota State Automobile Association at its annual meeting held in St. Paul last week. Reuben Warner was made vice-president, and Dr. W. H. Card was again elected secretary and treasurer. The board of directors is made up as follows: Duluth, H. H. Myers; Faribault, W. A. Bill; Mankato, G. A. Lewis; Minneapolis, George H. Daggett, Dr. A. A. Law, Thomas H. Kennedy, Dr. C. H. Kohler, Frank M. Joyce, and Dr. W. H. Card; Owotonna, E. T. Winship; Red Wing, C. E. Bechter; Rochester, Dr. E. O. Judd; St. Cloud, J. C. Cotton; St. Paul, Reuben Warner and F. B. Lynch; Winona, E. W. Williams.

Robert Beattie, of Little Falls, was elected president of the North Jersey Automobile Club, which has its headquarters in Paterson, at the annual meeting last week.. Other officers were chosen as follows: First vice-president, Dr. J. H. Faulkner; second vice-president, Benjamin Eastwood; secretary-treasurer, James Madden, Jr.; captain, George E. Layton; first lieutenant, W. B. Proude; counsel, Jacob Vanderclock.

At its annual meeting held in Daytonna, the Florida East Coast Automobile Association elected the following officers: President, A. B. Foster; first vice-president, S. H. Gove; second vice-president, J. H. Allen; secretary, T. E. Fitzgerald; treasurer, F. N. Conrad; directors, Edward White, Henry B. Welch, R. M. Bond, E. F. Oates, J. B. Moore, and A. Hilliard.

George H. Wilson having positively refused to serve a fifth year as president of the Louisville (Ky.) Automobile Club, Pike Campbell was chosen as his successor. The other officers are: First vice-president, John Ross; second vice-president, J. B. Lewman; secretary, Eugene Straus; treasurer, Walter Kohn.

The Troy (N. Y.) Automobile Club has been organized with the following officers: President, F. B. Twining; vice-president, E. S. Platt; secretary-treasurer, Alonzo McConihe; governors, G. A. Cluett; LeGrand C. Cramer, H. S. Ide, John McGlynn, Joseph J. Murphy, R. C. Reynolds, John Squires and Dr. L. R. Whitney.

Fort Smith, Ark., now has an automobile club—the Fort Smith A. C.—with the following officers and directors: President, John Vaile; secretary-treasurer, Fred Reutzel; directors, George Lyman, Clifford Speer and Frank Handlin.

Another Joy Rider with Fake Checks.

The Zumstein company of Cincinnati, to say nothing of more than a score of other firms and individuals, would like to know the whereabouts of an individual claiming to be a well known business man of Springfield, Ohio, who left a trail of worthless checks from Cincinnati to Lexington, Ky. The man started out for a large time, after hiring a car from the Zumstein company and filling it with rapid acquaintances. Before the first round of pleasure was over a large plate glass window had been broken. It cost the man just $90, which he paid by check, which was sent back with the discouraging stamp, "no funds." Along the booze trail to Lexington any one who wished might have a drink on the "Springfield" man. He would never permit another to buy, and at every stop stood treat for the house. Checks always satisfied the barkeeps. The return journey was even more merry, and when the Zumstein company presented their bill for $200, the Springfield good fellow paid it without a murmur, by check. Then he left town and since that time the wires between Cincinnati and Lexington and Springfield have been sizzling.

Bill for Transcontinental Boulevard.

By request of somebody, whose identity he has not disclosed, Representative Bourke Cochran of New York, introduced in Congress on the 14th inst., a bill which old timers pronounce the most remarkable legislative contrivance that ever found its way into the curiosity catacombs of the House. Its aim is to transform the 35th parallel of north latitude into a macadamized highway, to be constructed by the United States Government. It is to extend from the Atlantic Ocean to the Golden Gate, via Newbern, N. C., and to be electric lighted, policed and bordered with new idea garden cities wherein neither man, woman, nor child shall break the speed limit of eight miles an hour, on foot, roller skates, bicycles or automobiles.

There is a man in Yarmouth, N. S., who would like to trade a 15-year-old orchard, containing about 1,000 trees, two summer cottages, the whole valued at $5,000, for a good automobile. He noticed the advertisement of a Pittsfield (Mass.) dealer who had a car for sale and made the proposition to him.

MANY GARAGES LOOTED BY A LAD

Juvenile Prisoner at Los Angeles Accused of Long Series of Robberies—His Big Store of Spoils.

By the arrest of Earl Stein, 16 years old, the police of Los Angeles think they have captured one of the cleverest crooks in the city, one whose garage robberies have baffled the city's detectives for more than a year.

When a detective searched the boy's room it was found to contain thousands of dollars' worth of automobile parts, tools, all kinds of tobacco, and other things.

Several days prior to the arrest of young Stein, the Auto Exhibit Co. reported the loss of valuable machinery, and a piece of brass worth $90. A young man employed at the place was suspected. A detective, in a talk with him, learned that two boys had been in the garage a short time before the robbery was discovered.

Suspicion rested upon young Earl Stein. His mother refused to permit a detective to enter the house, and the latter procured a search warrant. In the boy's room, he says, were found hundreds of parts of automobiles. Two heavy, brass bound oaken chests contained hundreds of fine tools, and more parts of motors. There were also two motorcycles, dismantled so that identification would be impossible; automobile tires, a handsome shot gun, a trunk filled with Egyptian and Turkish cigarettes, expensive cigars, cigaret papers, boxes of tobacco and 20 pounds of chewing tobacco.

Earl is now at the Detention Home, awaiting trial. With him was arrested Augustus Gibbs, 15 years old, who was charged with having stolen a bicycle from Detective James Campbell, of the District Attorney's office. Stein is said to have been implicated, as it is alleged that the bicycle was dismantled and parts of it hidden in a sand pile, while the rest was taken to his room.

The garage robberies in Los Angeles have baffled the police for more than a year. It appeared that the thefts were committed by experts, because in every instance small but valuable parts of motors were taken. The machinists employed at the various garages were closely watched but no proof that any of them was guilty was obtainable. By the arrest of Stein the police hope to solve the mystery.

Automobiles Form a Funeral Cortege.

Butte, Mont., had its first automobile funeral recently when 18 cars, draped in sombre black, and carrying friends and mourners, followed the hearse which carried the remains of Joseph C. Kennedy to the cemetery. The dead man was a prominent member of the Butte Automobile Club, and sold cars in that city.

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The Week's Patents.

879,509. Flexible Tire Frame. Eugene D. C. Bayne and Lawrence A. Subers, Cleveland, Ohio. Filed Feb. 19, 1907. Serial No. 368,181.

1. A tire frame comprising an annular flexible tube having overlapping extremities, a rotatable support therefor, and means for aligning said frame upon said support, comprising keys inserted in the inner edge of the frame and bearing against the edge of said support, substantially as described.

879,511. Tire and Luggage Carrier for Automobiles, etc. Joseph J. Bond, Reading, Mass. Filed March 20, 1907. Serial No. 363,466.

1. A carrier comprising a receptacle formed to enter an automobile tire, and provided with means for attachment to a support, said receptacle being surrounded by a tire receiving space, and the said carrier having means for securing a tire in said space.

879,646. Foot Rest for Vehicles. Louis A. Jones, Cambridge, Mass. Filed Feb. 20, 1907. Serial No. 368,512.

1. An apparatus of the character described comprising in its construction a body, a movable foot rest located at all times within said body, a door pivoted to swing about a vertical axis, and mechanism operatively connecting said foot rest to sad door.

879,757. Piston Ring. Henry Ford, Detroit, Mich. Filed July 16, 1906. Serial No. 326,481.

1. A packing ring comprising an inner ring having oblique overlapping ends and a pair of outer facing rings seated side by side on the inner ring each having their ends halved and gained together, said ends being staggered in relation to each other and to the inner ring ends.

880,024. Explosive Engine. John D. Hay, Chicago, Ill., assignor of one-half to William R. Donaldson and one-fourth to George W. Marble, Chicago, Ill. Filed Oct. 13, 1906. Serial No. 338,752.

1. In a device of the class described the combination with a crank case and cylinder secured thereto having an inlet port of a passage cored in the wall of the cylinder opening directly into the crank case at one end and opening through the side of the cylinder, an exhaust port opening from the cylinder above said passage, a piston in

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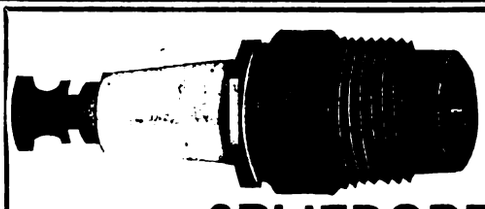


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said cylinder having a chamber in the head thereof, passages leading downwardly therefrom through the wall of the piston and opening outwardly, one of said passages adapted to register with the end of the passage in the cylinder wall and a passage adapted to communicate with the other passage in the piston at the lowest limit of movement of the piston and also communicating with the inlet port for the cylinder.

880,025. Running Gear or Suspension Frame for Vehicles. Reinhold Herman, Crafton, Pa. Filed Dec. 15, 1905. Serial No. 291,876.

1. A vehicle frame comprising the combination with a pair of axles, and springs mounted thereon, bolsters mounted on the springs, and a pair of superposed frames, one of which is journaled at one end in one of the bolsters, and the other of which is journaled at the opposite end in the other of said bolsters.

880,050. Reversing Gear for Internal Combustion Engines. Jakob Sulzer, Winterthur, Switzerland. Filed Dec. 5, 1905. Serial No. 290,369.

1. In a reversal gear for internal combustion engines the combination with a fuel admission gear of a roller carried by said fuel admission gear, an actuating cam and means for moving the roller into a middle position beyond the range of the actuating cam and into either of two extreme positions within the range of the cam and corresponding respectively with the two directions of running of the engine, substantially as described and for the purpose set forth.

880,051. Reversing Valve Mechanism for Internal Combustion Motors. Jakob Sulzer, Winterthur, Switzerland. Filed Dec. 8, 1905. Serial No. 290,915.

1. An internal combustion or explosion motor having a reversing valve and a fuel-supply valve, in combination with oscillating cam plates for actuating said valves, and means for shifting the oscillating cam plates to an intermediate position in which they do not move the said valves, and into two extreme positions, corresponding to the two directions of movement of the motor, in which they do move the said valves, substantially as described.

880,076. Running Gear for Motor Driven Vehicles. Rex P. Hicks, Minneapolis, Minn. Filed Nov. 21, 1906. Serial No. 344,451.

1. In a running gear of the kind described, the combination with a main frame and a supplemental frame, of rear wheels journaled to said supplemental frame, a driving wheel journaled to said supplemental frame between and forward of said rear wheels, resilient main frame supporting connections applied to said supplemental frame longitudinally intermediate of the axes of said driving wheel and of said rear wheels, and connections between said main and supplemental frames for causing the same to travel together, substantially as described.

880,083. Friction Clutch. Ernst Lehmann, Marchienne-au-Pont, Belgium. Filed Nov. 27, 1906. Serial No. 345,370.

1. In a friction clutch in combination a casing, the said casing serving as a driving member and being provided with teeth on its outer edge, friction members co-operating with the inner face of the said casing, a driven shaft, a sleeve adapted to slide on said shaft and acting on the friction member to bring them in frictional engagement with the driving member, bolts or catches pivoted on the said friction members and adapted to be engaged with the teeth on the driving member, a second sleeve actuating the said bolts or catches, and means whereby the said second sleeve is acted upon on the stopping of the clutch substantially as described and for the purpose set forth.

880,084. Friction Driving Clutch. Axel D. Le Moon, Chicago, Ill. Filed April 11, 1907. Serial No. 367,646.

1. The combination of a driving member and a driven member separately journaled to rotate about the same axis, a friction shoe loosely mounted between said members and having thereon two cam surfaces located in different angular positions with respect to the axis of said members, one of said members having thereon a pair of projections angularly spaced with respect to said axis to correspond with the angular spacing of said cam surfaces, said cam surfaces and projections being adapted to urge said shoe toward said driven member through the relative rotation of said shoe and driving member.

880,093. Speed Limiting Device for Electrically Ignited Explosive Engines. Frederic S. Perrin, New York, N. Y. Filed Jan. 9, 1907. Serial No. 351,489.

1. In an electrically ignited explosive engine, a primary circuit, means for shunting the primary current from its circuit, consisting of a speed indicator; a movable index, a contact point adapted to be set at any point upon the indicator scale, in the path of the index; and an electric circuit, in multiple with the primary circuit, including the contact point and the index.

880,110. Acetylene Gas Generator. Leon Sussman, Bayonne, N. J., assignor to The Manhattan Screw and Stamping Works, New York, N. Y., a Firm. Filed April 28, 1906. Serial No. 314,114.

1. In an acetylene gas generator, a carbid chamber and a water chamber, a valve which in one position establishes communication between the two chambers and which in another position throws the carbid chamber into communication with the outer air, and another valve located in the connection between the water chamber and the first-named valve and provided with a stem which entends outside of said chamber for regulating the flow of water to the carbid chamber.

880,117. Compensating Mechanism for Automobiles. Charles H. Ball and John F. Rogers, Cleveland, Ohio. Filed April 6, 1906. Serial No. 310,297.

1. A compensating mechanism for vehicles, comprising a driven axle, a wheel mounted to turn independently on the axle, and mechanism to positively engage the wheel with the axle comprising segments and a cam and wedges to force the segments into locking engagement with the wheel.

880,184. Lamp and Lantern. Charles Bergener, Rochester, N. Y., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Filed Sept. 30, 1907. Serial No. 395,108.

1. The combination with a lamp or lantern body and a movable part adapted to be fastened thereto, of a spring catch pivoted to said body and a lug on said movable part which is engaged by said catch, the latter being constructed of elastic wire and comprising bows on opposite sides of said lug, pintles at adjacent ends of said bows, locking portions at the opposite ends of said bows engaging the outer face of said lug, and an end loop forming a raised finger piece, substantially as set forth.

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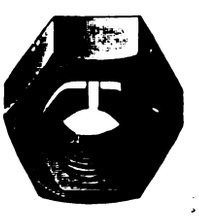
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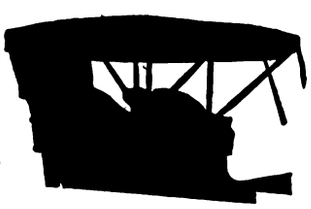
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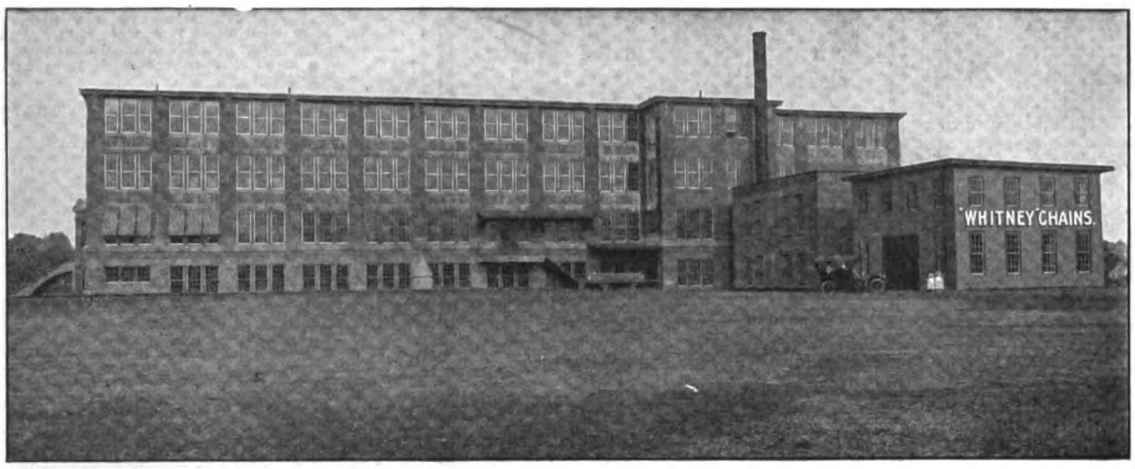
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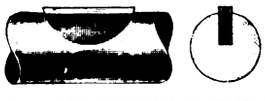
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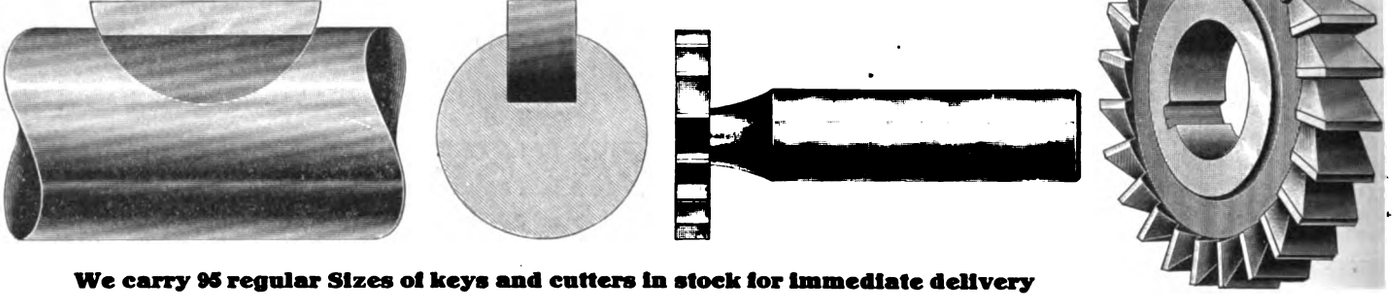
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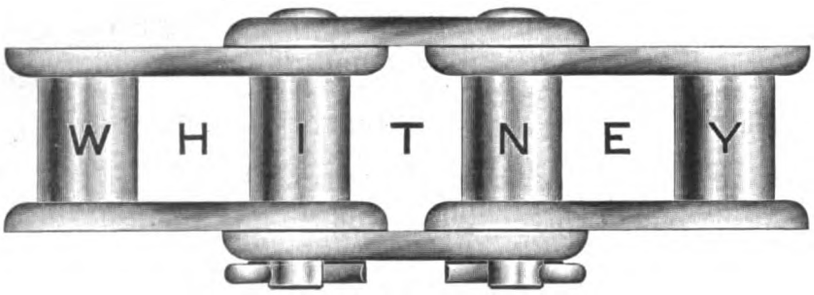


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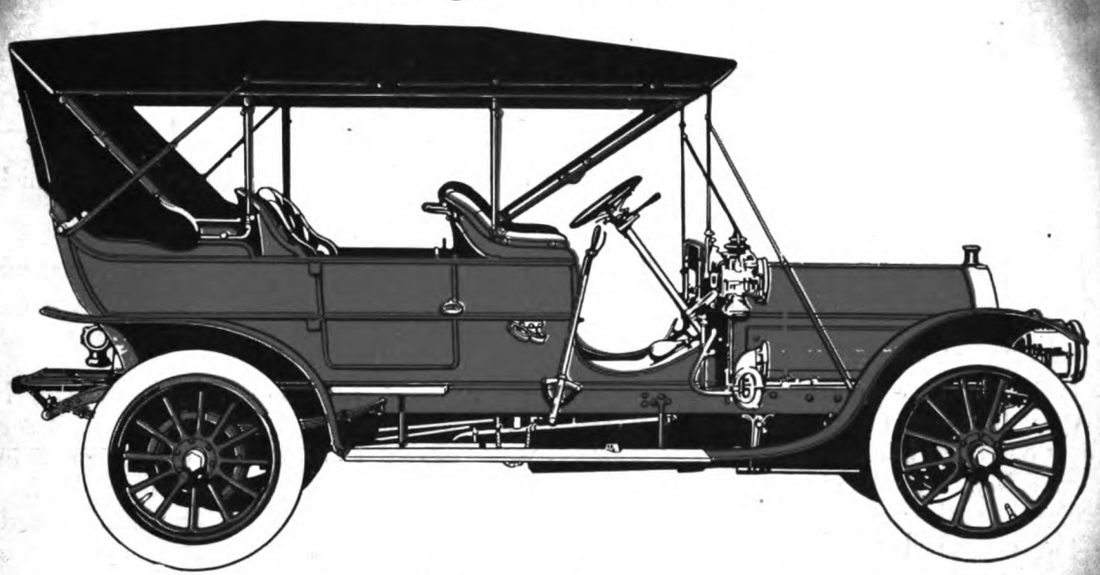
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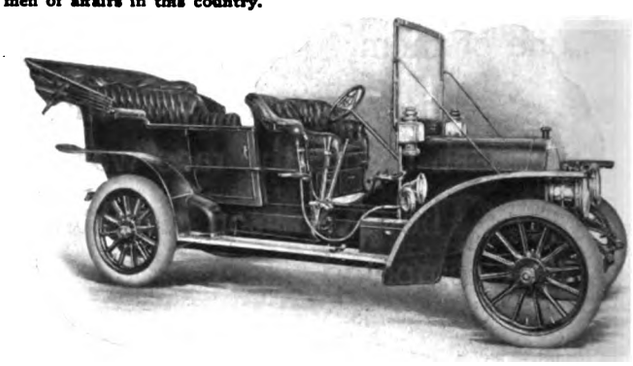
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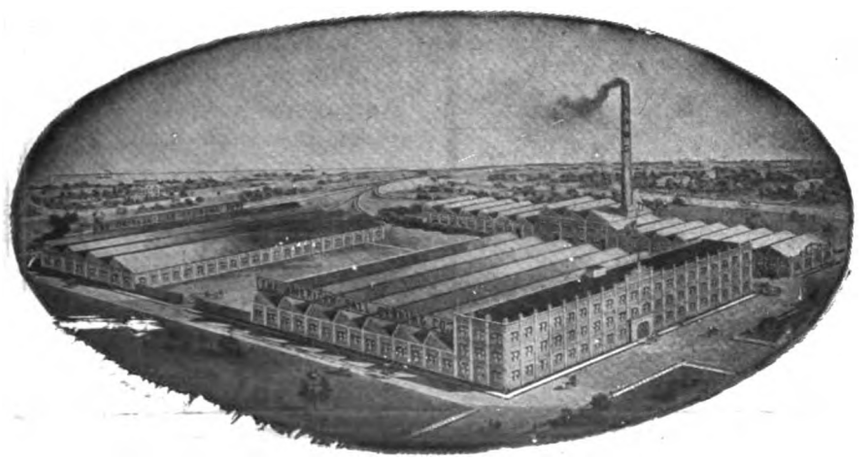


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Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

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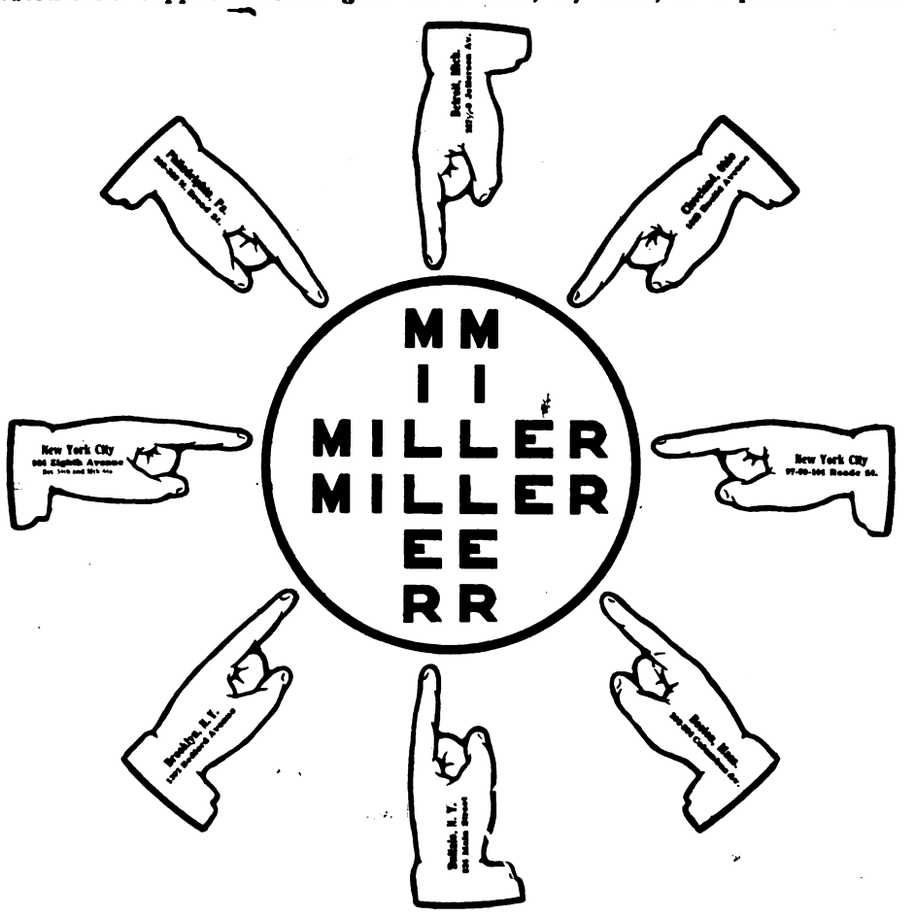
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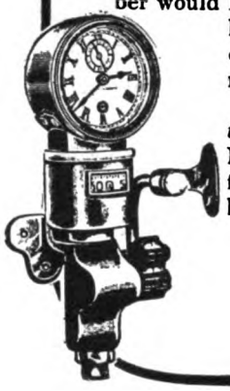
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NEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us — it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out — that hurt the consumer, the dealer and ourselves. For the jobber knows no law.



So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

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Axles (3 sizes), Clutches, Reaches, Buffers, Propeller Shafts, Hand Levers, etc.

If you have any designs of your own Auto Parts which you wish to have **manufactured in quantity,** write us, sending prints and specifications with required quantity and deliveries. We will respond promptly.

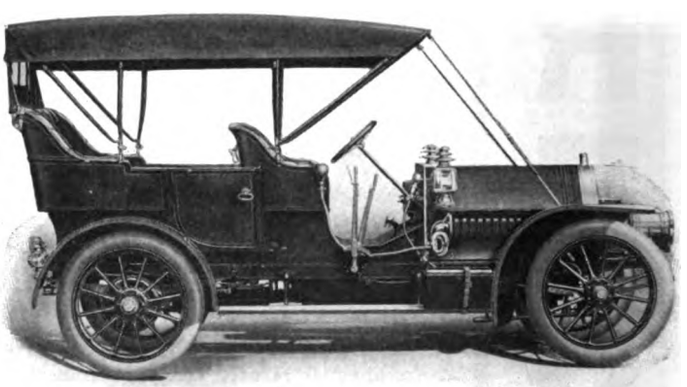
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THE "NON-SKIDDING" CAR



Compare following specifications with other cars at $3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY

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THOMAS CAR

leading in the Race from New York to Paris

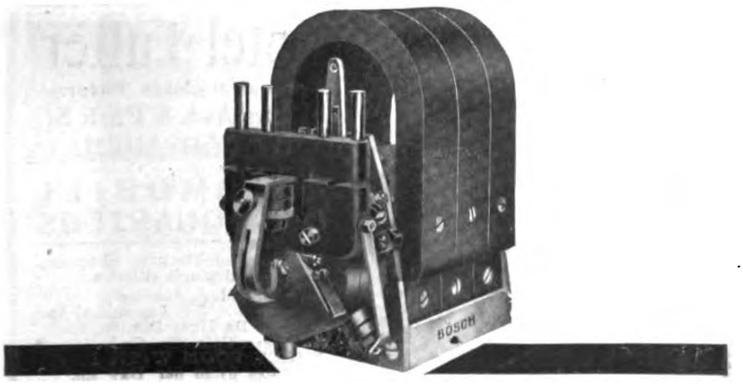
The remarkable performance of the Bosch Magneto on America's representative is beyond a parallel. The Bosch Ignition System accomplished its work in such a reliable manner that the drivers of the car have not found it necessary to touch or repair the Magneto since leaving New York.

Equip your car with the most reliable ignition system in the world.

Bosch Magneto Company

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NEW YORK



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



A TOURING CAR IN THE TRUE SENSE OF THE TERM

The man who gets the most pleasure from his touring car is not the man who limits his touring to the macadam roads; for the most interesting sections of the country and those of the greatest natural beauty lie, for the most part, beyond the regions of improved highways. For that reason, there is no quality of a motor car more important than the ability to traverse bad roads.

In unique degree, the White possesses the qualities of a "bad roads" car. Owing to the perfect flexibility of the engine, the White tourist can accommodate the speed of his car, yard by yard, to the condition of the road, speeding up on each little stretch of good road, and slowing down for each hole and "thank-ye-ma'am"—without shifting of gears or any manipulation except of the throttle. The tremendous pulling power of the White engine under all conditions means immunity from getting stuck in the mud or sand. Running through deep water, as in fording streams, is easy for a White. And as for climbing grades in mountainous regions—there is no other machine which can approach the White in hill-climbing qualities.

Drive a White Steamer and see the country

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Jones Speedometer

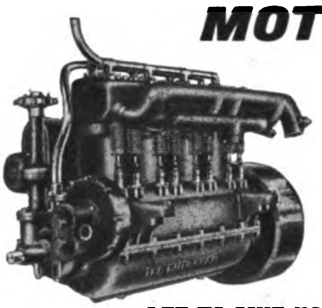
the pioneer is the accepted standard Speed Indicator. Standard by performance—not by mere words. Prices range from $25.00 to $200.00. At any price the Jones Speedometer is the best in the world. Comparison will prove this. **And when we say comparison we mean internal as well as external.**

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that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

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which as motor experts we picked as the best in the world, we are now making and selling.

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You will never know its merits until you do. Why be bothered with a smeared machine, when you can procure a lubricant that will NOT leak out, and lasts LONGER than any other? Those who are on the alert for the BEST, usually get it!

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Manufactured only by the

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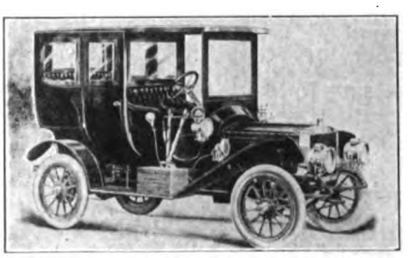
Our experience in successfully meeting extraordinary requirements has taught us that the dynamic stress or combination of shock, push and twist to which automobile springs are subjected, can only be resisted by the use of a material of high dynamic qualities, made up by a process that will preserve all the initial life of the metal and constructed on mechanically perfect principles.

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Our new booklet on springs explains these points in detail. Let us send it to you to-day.

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Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY, Racine, Wis.

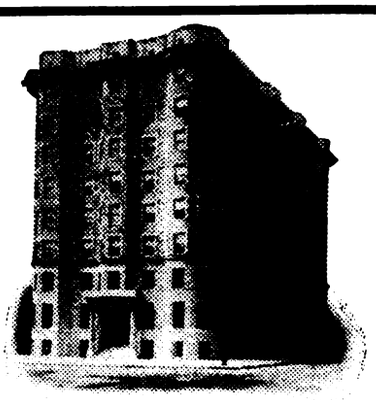


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SCALELESS—RUSTLESS
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Rates $1.50 per Day up.
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No. 11 Palmer-Singer Six-Sixty, Runabout 6 Cylinder, 60 H. P. $2,850

Palmer-Singer Six-Fifty, Racing Car 6 Cylinder, 50 H. P. $2,450

All cars sold by us are licensed under Selden patent AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Passenger 40 H. P. Touring Car $4,000



Palmer-Singer Four-Thirty The "Skimabout" 4 Cylinder 30 H. P. $1,950

Palmer-Singer Town and Country Car, 28-30 H. P., $3000

If you are thinking of a light touring car, why not get one that is also an ideal town car? The Palmer-Singer Town and Country Car is a beautiful open car, amply powered for country use—and a closed car for town use—the BEST town car—the BEST light touring car money can buy.

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Exclusive Features of Solar Lamps

(1) The Internal Method of Screw Assembling

¶ All Solar Headlights when assembled are riveted by internal screws. This exclusive feature produces a perfectly smooth exterior surface, permitting ease of cleaning. This is a very important feature for the owner to consider when purchasing a motor lamp.

¶ This important detail and all others explained fully in our new 1908 catalog. Write for copy.

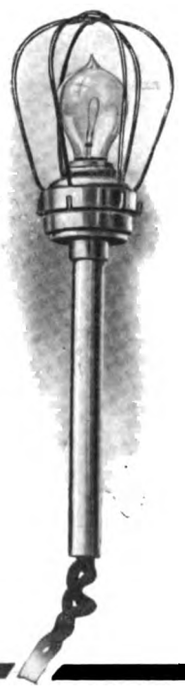


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When in trouble at night the Wico Inspection Lamp is a positive necessity. A sufficient length of cord is provided, so that any part of the car may be reached readily. It is light, compact and durable. The electric light bulb is provided with a strong brass cage. All parts are made of brass and highly polished. Price, in box convenient for carrying, prepaid, **$1.75**



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Garford

The Garford avoids "exclusive features."

While the combination is new, there is nothing in the car which is not extensively duplicated in principle in other cars all over the world. The Garford buyer takes no chance that his car will ever become obsolete in any detail (unless some most unlikely invention actually revolutionizes the trade).

Where other makers sometimes include all the original features they can, the Garford makers have aimed to avoid not only all original features, but all features which have not been approved and accepted by **the majority.**

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Rambler

Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any $4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., $1900

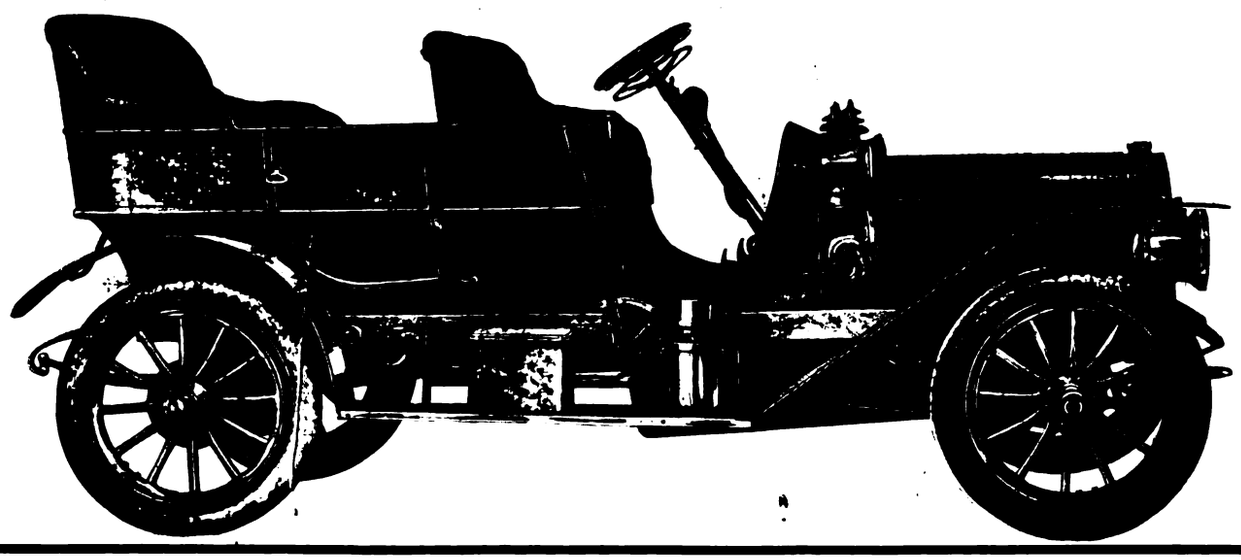
Write today for special circular describing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, April 30, 1908. No. 5

A. M. C. M. A. SELECTS SHOW DATES

Exhibition in Grand Central Palace Will Open Dec. 31—Circumstances than Influenced the Selection.

Having decided to assume the whole burden of promoting and conducting the next show in Grand Central Palace, New York, the Automobile Club of America having condescendingly unshouldered its part of the load, the American Motor Car Manufacturers Association has lost no time in setting the dates for the function.

General Manager Reeves announced early this week that the show committee, of which H. O. Smith, of the Premier Motor Car Co., is chairman, had selected the dates Thursday, Dec. 31, 1908, to Thursday, Jan. 7, 1909. These dates will precede the period of the Licensed Manufacturers' show in Madison Square Garden; as although the A. L. A. M. has not made a definite decision, it is pretty well known that the Garden show will occupy either the second or the third week in January.

The A. M. C. M. A. committee considered the desirability of including in the program a seeing-the-old-year-out celebration on Dec. 31st, but probably recalling the sad results of the importers to work up a hurrah of the sort last year, they wisely abandoned the idea. No effort will be made to attract the horn-tooting, confetti-throwing mob that fills the street on the last night of each year, and that inclines to "rough-house" methods generally.

The show committee thinks that the show dates are very good ones from the selling point of view, on account of the many dividend payments at that time of the year. It estimates that about 150 great railroad and industrial corporations pay out from this city almost $200,000,000 in dividends on stocks alone, in addition to the millions of dollars that are disbursed as payments on bonds, mortgages and other securities, and that the recipients are then in a mood to spend money for automobiles, among other things.

Martini Headed Toward Bankruptcy.

The Martini Import Co., New York, has gone the way followed during recent weeks by several other importing houses, a petition in bankruptcy having been filed against it by these creditors: Frank Presbrey Co., $505 for advertising; Ernest Edwards, $371, advertising, and Pneu L'Electric Co., $226, merchandise. It was alleged that the company is insolvent and on March 27 transferred all its assets to F. F. Palmer, a creditor. The company is a New York corporation, incorporated March 1, 1907, with a capital stock of $50,000, and continued a business previously conducted by a firm which had dissolved.

Acme Makes Another Payment.

The receiver of the Acme Motor Car Co., Reading, Pa., has declared another dividend of 20 per cent., making a total of 85 per cent. that has been paid to the creditors. The receiver still has on hand $5,824, which is held pending final settlement of the claim of Col. Peter H. Corr, for $5,000, which the referee has disallowed.

Col. Corr alleged that the amount was an obligation of the company, but the referee decided that it represented a note given by Frank A. Devlin, as president of the Acme company, to replace a personal note given long before, and that it was done without the consent or ratification of the company.

Ampere Again Short Circuited.

A petition in bankruptcy has been filed against the Ampere Mfg. Co., New York, makers of electric appliances, by these creditors: Leopold Pollock, $911; John S. Lamson & Brother, $37, and Joseph J. Fitzhenry, $9. It was alleged that the company is insolvent and has transferred property to some creditors to prefer them. On January 30 Marcel Levy was appointed receiver of the company in the Supreme Court in dissolution proceedings. The liabilities were $1,727 and the assets $1,283.

TO REDUCE SELDEN ROYALTIES

Pressure from Within A. L. A. M. Finally Forces Action—New Basis Agreed on and Court's Approval Sought.

One of the important results of M. J. Budlong's tenure of office as general manager of the Association of Licensed Automobile Manufacturers became public property when on Saturday last the receivers of the Electric Vehicle Co. took the first step toward reducing the royalty exacted of the members of the Association under the terms of their membership agreement recognizing the Selden patent. If the court approves the receivers' application, the Electric Vehicle Co. will obtain annually not more than $150,000 as its share of the royalty, and the Association not more than $100,000, and in the event of a decision unfavorable to the patent being rendered, the royalties will be trusteed pending the result of an appeal.

It has been an open secret that for nearly a year certain members of the A. L. A. M. have been bringing strong pressure to bear to attain this end and when, early last fall, Budlong was made general manager, a strong card was obtained. As former president of the Electric Vehicle Co., he naturally was conversant with the other side of the situation and thus was unusually well placed. The whole matter was left with the executive committee of the A. L. A. M., and with Budlong they worked to good purpose, although the appointment of receivers for the Electric Vehicle Co. did nothing to simplify their task.

The action of the receivers on Saturday last represents the influence of their labors. On that day the receivers, H. M. Barrett and H. W. Nuckols, applied to the United States Circuit Court for the New Jersey District, for permission to modify the existing agreement between the company and its licensees under the Selden patent. The petition recites that under the existing

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agreement the licensees are obligated to pay 1¼ per cent. of the catalog price of all vehicles they produce, except such as may be exported, on which the royalty is ¼ per cent. Payments are required to be made quarterly, a discount of 20 per cent. being allowed for payments within 15 days, thus making the net royalty 1 per cent. The receivers acknowledge what has been known to the limited few—that a "large majority" (all save two, it is understood) have refused to pay the sums due for the past two quarters, on the ground that the royalty is "excessive and oppressive." Accordingly, the receivers believe it to the interests of the creditors and stockholders of the Electric Vehicle Co. to modify the agreement.

This proposed agreement, if made, will reduce the royalties required to be paid by the members of the Association by 20 per cent., with the further limitation that the maximum royalties to be paid in any one year shall not exceed $250,000. It also provides that should a decree be entered adjudging the Selden patent invalid, the royalties shall, pending an appeal from that decision, be paid to the trustee to await the outcome of the appeal. It also contains certain modifications of the terms upon which new members to the Association may be admitted, and surrenders to the Association control of litigation to compel payment of royalties in excess of the maximum annual amount of $250,000 above referred to. The "terms for new members" are understood to be a matter of phraseology.

The court has set Monday, May 4th, as the date for hearing on the petition.

If the Court lends approval, as is probable, it will mean that henceforth the total revenue in royalties from the Selden patent will not exceed the sum of $250,000 annually. The 20 per cent reduction in the royalty will bring the proportion from 1¼ tol per cent., which, less the 20 per cent offered for cash 15 days, will make the net royalty eight-tenths of 1 per cent. There will be no change in the basis of division between the Electric Vehicle Co. and the A. L. A. M. As at present, the former will retain three-fifths and pay to the association the remaining two-fifths. On this basis, if the maximum amount,$250,000, is reached, the Electric Vehicle interests will receive $150,000 and the A. L. A. M. $100,000.

Rambler Branch Books Big Order.

One of the largest single orders ever placed with a Chicago automobile house was secured by the local branch of Thomas B. Jeffery & Co., on Thursday, April 23. when six large seven-passenger Rambler cars were purchased by the Big Horn Basin Development Co. for use at Cody, Wyo. The Chicago promoters of the company were desirous of securing six automobiles that were thoroughly reliable and dependable, for the purpose of transporting passengers from Cody, the railroad station, to the land they have for sale. Hence the purchase of Ramblers.

The Week's Incorporations.

Cleveland, Ohio.—Whitcomb Auto Livery Co., The, under Ohio laws, with $25,000 capital. Corporators—Mac E. Meisel et al.

Hammond, Ind.—Hammond Garage Co., under Indiana laws, with $5,000 capital. Corporators—J. W. McMullen, E. C. Houk, Thos. Larene.

Syracuse, N. Y.—Kolbe Auto Co., The, under New York laws, with $4,000 capital. Corporators—Richard E. Kolbe, John D. Buckmaster, and Florence L. Buckmaster.

Camden, N. J.—Penn Auto Supply Co., under New Jersey laws, with $20,000 capital; to deal in automobiles, etc. Corporators—F. W. Mills, H. M. Browne, and H. P. Jones.

New York City, N. Y.—Regal Motor Car Co. of New York, under New York laws, with $50,000 capital. Corporators—Henry Amerman, 111 Broadway; Francis P. Rawle, 6 Wall street; James C. Austin, 156 Broadway, New York City, N. Y.

St. Louis, Mo.—Seeing St. Louis Automobile Co., under Missouri laws, with $2,000 capital; to operate automobiles for hire, to deal in automobiles and automobile sundries. Corporators—G. Delaplaine, T. G. Boehm, J. W. Hapel, B. W. Frauenthal, E. Buchanan.

How Railway Discrimination Hurts.

"Discrimination in freight rates by the railroads is one of the predominating drawbacks of the automobile industry," says Frank Briscoe, makers of the little $500 Brush runabout which has become so popular in the west. "Especially is the matter of freight rates discouraging to the maker of small cars and motor buggies. There is no sane reason why the automobile should not be shipped as cheaply as carriages. The small cars could easily be 'knocked down,' the body and running gear shipped as a carriage and the motor billed as an engine just as marine engines are shipped; thus saving the buyer a snug little sum on transportation rates. The Freight and Transportation Committee of the American Motor Car Manufacturers' Association have this matter in hand and should be supported by all manufacturers of cars regardless of trade affiliations. When the freight rates are amicably adjusted the first cost of an automobile will be materially reduced."

Boston Bars Even Studded Tires.

A number of Massachusetts owners will have to invest in new tires if the edict of the Metropolitan Park Comission is rigidly enforced. The commission, which enjoys privileges greater than those of the czar, has ruled that no automobiles fitted with not merely tire chains, but with armored or metal studded tires, or other devices of metal, will be permitted to drive on any of the roadways or parkways in Boston under its jurisdiction. An order embodying this provision has been framed by the commissioners and will go into effect to-morrow (Friday). Violation of the rule is made punishable by a fine not exceeding $20.

Darracq Files Its Schedule.

Schedules in bankruptcy of the Darracq Motor Car Co., New York, which recently failed, show liabilities of $61,219 and nominal assets of $85,232, consisting of twelve automobiles, $44,867, covered by a bill of sale to the New Amsterdam National Bank as security for a debt of $11,500; one other automobile not in the bill of sale, parts and accessories, $16,571; furniture and fixtures, $1,226; machinery, $1,421; accounts and notes, $20,762; cash, $35, and fire insurance, $350. Among the creditors are the Michelin Tire American Agency, Inc., $27,433, mostly for loans; the Electric Vehicle Co, $3,656; E. Lamberjack & Co., $2,088; H. L. Toplitz, $1,643, and Pitt & Scott, $1,353.

Pitts Jailed at Walla Walla.

William H. Pitts is under arrest at Walla Walla, Wash., charged with obtaining money under false pretenses by swindling Fount A. Butcher out of $50. According to the information Pitts represented himself as the agent of the Northern Motor Car Co., of Detroit, Mich., and as such offered to sell an automobile to Butcher, on which $50 was paid in advance. This occurred February 15. The warrant recites that Pitts made false statements when he claimed to be the agent for tehcompany, and that he had no connection with the company. Pitts claims that the money was passed on a business transaction and that he had no intent to defraud.

Salzman Leaves Factory for Retailing.

George Salzman, for six years assistant superintendent of the E. R. Thomas factory at Buffalo, has resigned that position to become treasurer and general manager of the American Motor Car Co., of Atlanta, Ga., agents for the Thomas Flyers. Salzman's splendid driving in the recent Savannah road race won him many friends in the South, and the Atlanta company placed a $65,000 order with the proviso that Salzman be released to take the management of their company.

New Model Comes from Moline.

"Moline Limited" is the style of a new model which has been brought out by the Moline Automobile Co., East Moline, Ill., It has a four cylinder, water cooled, 35 horsepower motor; sliding gear transmission with four speeds; 115 inch wheel base; two systems of ignition, magneto and storage battery, and unit power plant with three point suspension. It will retail for $2,500.

What was the Milwaukee Auto Livery Co., of Milwaukee, Wis., now is the Bland-Mueller Auto Co. The necessary certificate recording the change of name has been filed.

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WEST INDIAN COMPANY A FRAUD

Uncle Sam so Brands It—Hatched in Connecticut, Its Promoter Spun South American Tales.

The Postoffice Department has issued a fraud order against Frederick U. Wells and the West Indian Motor Car Co., which operated at New Haven, Conn. Wells recently was arrested in Kingston, Jamaica, but later was released.

It is stated that Wells procured a charter under the laws of South Dakota and opened an office in New Haven. He advertised for agents, and to persons replying he would represent that his company had a capital of $500,000, and branch offices in Porto Rico, Jamaica, Cuba, Nassau, Bermuda, Venezuela, Brazil, Mexico, and the Argentine Republic, and that it was in want of agents.

If the person addressed would only be kind enough to remit the small sum of $100—as an evidence of good faith on the part of the said person—the company would furnish him employment at the salary of $1,200 per annum and a free ticket to one of the branch offices of the concern.

The persons who sent in money were badly "stung." The company had no capital stock, except that supplied by the various victims; no plant, no offices, no motors—not even a gallon of gasolene. The officers were either fictitious, or tools of Wells, it is stated.

Wells, who appeared to be about 26 years old, first appeared in New Haven last October, saying that he came from East Hartford. He took an office at 902 Chapel street, and immediately started in to boom his "gilt edged enterprise," the "West Indian Motor Co.," which he claimed had $500,000 capital, and was the exclusive agent for all the first class cars in South America. His plan was to get chauffeurs to go to Jamaica, offering them large yearly salaries if they would buy stock in the company. As a further inducement he offered to give $500 worth of stock for $200. He claimed to have a $100,000 contract with the government to carry mails from San Juan to Ponce by motor car. Wells advertised extensively for chauffeurs and many went up to his office to consider his offer, but it was just a bit too magnetic, and only one or two were parted from their money.

Wells ordered a number of automobiles from the New Haven dealers, for which he is alleged to have paid with worthless checks; the machines were not delivered.

British Business Falling Off.

British trading in foreign cars and parts has undergone a marked shrinkage since the beginning of the year. During the month of March the total imports revealed a drop of no less than $311,730, as compared with the corresponding figures of 1907. In all, only 433 complete cars were imported, their combined value amounting to $775,785; while 282 chassis, valued at $397,625, and parts to the value of $712,510, brought up the total to $1,885,920. The total importations for the first quarter of 1908, consisted of 1,111 cars, 750 chassis, and parts, the valuation amounting in the aggregate to $4,990,315. The corresponding summation of last year amounted to $5,823,835. In the export field a similar falling away has been experienced, though not to so noticeable a degree. During the month of March, 182 complete cars, valued at 0327,303; 20 chassis valued at $30,975, and $161,750 worth of parts were exported, thus bringing the total export figures up to $520,030. The corresponding figure for March, 1907 was $552,970. The gross exports for the first three months of the year amounted to $1,555,640, as compared with a total for the same period last year, amounting to $1,588,010.

Evidence of Trade's Recovery.

Reports from many directions indicate that the automobile industry, generally speaking, has about recovered from the effects of the financial depression and has regained its tone.

As one instance of the fact, on Friday last, the Maxwell-Briscoe Motor Co. received a telegram from the Fernald Automobile Co., its Denver agent, offering $50 per automobile for a two-carload shipment—twelve Maxwells—conditional on shipment being made within ten days.

"Nor is Denver the only place that is crying for cars. The demand is simply phenomenal," said Benjamin Briscoe, in speaking of the telegram. "I don't know whether we are doing all the business, but I do know we are producing 50 per cent. more cars this year than last and we simply can't keep up with the demand. A few days ago we got a telegram offering $500 premium for one car load of six machines—a bid that outdoes Denver. Of course we cannot comply. We've put on night forces at our three factories and hope soon to catch up."

Making Mitchell's Big Plant Bigger.

The Mitchell Motor Car Co. is adding two more buildings to its already big plant at Racine, Wis. Of the new structures one is an addition, 100x100 feet, to the machine room, and the other, 130 by 420 feet, is a warehouse, paint department and metal working department. The factory expects to ship 250 Mitchells this month, but is still far behind its orders.

Angus Flirting with Beatrice.

The Angus Automobile Co., which commenced building cars last year in Angus, Neb., already is seeking a new location. It has told the Commercial Club of Beatrice, Neb., that it is willing to be "induced" to remove to that place.

KELLY HEADS A NEW COMPANY

Becomes President of Big Lockport Concern that will Produce Tires—Its Other Officers and Plans.

Charles F. U. Kelly, than whom few men are better known, is no longer sales manager of the Continental Rubber Works, Erie, Pa. After many years of service in the industry he finally has made a change which places him in a position that will give practically free rein to his undoubted resourcefulness and unlimited energy. He has become president of the newly organized Lockport Rubber Works of Lockport, N. Y., which has been incorporated under New York laws with $300,000 capital.

The other officials are J. Edwin Davis, vice-president; H. M. Wood, secretary. Mr. Davis, who was at one time treasurer of the Boston Woven Hose & Rubber Co., has had 24 years experience in the rubber industry, in both the executive and manufacturing departments. Experienced men for all other departments have been engaged and President Kelly promises that in about thirty days, when deliveries commence, the tire trade will have something to talk about.

The product of the company will include tires of every sort—for automobiles, bicycles, motorcycles and carriages. Hose, belting and a full line of mechanical rubber goods also will be manufactured.

The factory at Lockport has more than 110,000 square feet of floor space, and is thoroughly equipped with new and modern machinery and appliances.

Death of the Senior Grout.

William L. Grout, known in the automobile industry as father of the Grout brothers, of Orange, Mass., and later as active head of the Grout Automobile Co., died at his home in Greenfield, Mass., Wednesday, 22d inst. Mr. Grout had long been prominently identified with sewing machine interests, his first business connection being with Thomas H. White of the White Sewing Machine Co. His most effective work was at Orange in connection with the New Home works, of which he was superintendent, and with which he was connected for 26 years. He had been an invalid for many years.

New Assemblers in Wisconsin.

E. C. Deibler and T. H. Russell have gone into the automobile business in Berlin, Wis. They are assembling cars on a limited scale from purchased parts.

Carriage Company May Build Cars.

The Velie Carriage Works, Moline, Ill., is reported to be contemplating the manufacture of automobiles. The report, however, lacks confirmation.

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"Keep Your Eye on Continentals!"

Continental TIRES

In the Briarcliff Race.

More Continentals ran through the Race without trouble than any other tires.

The Continental Ready-Flated equipment received unqualified commendation from every driver using it.

The Briarcliff race was the most severe tire test ever held in this country. It demonstrated once more that Continentals, which hold the world's record for long-distance racing, and which have the largest sale of any automobile tire, are the leaders also in reliability and durability.

TRADE-MARK

CONTINENTAL CAOUTCHOUC COMPANY

J. M. GILBERT, General Manager

1788-1790 Broadway, corner 58th Street, New York, N. Y.

BRANCHES:

DETROIT—226 Jefferson Ave.

SAN FRANCISCO—422-424 Van Ness Ave., cor. Ash.

DISTRIBUTING AGENTS:

Acme Rubber Co., 925 Jefferson Ave., Toledo, Ohio.
Centaur Motor Co., 59 Franklin St., Buffalo, N. Y.
Continental Agency Co., 1268 Euclid Ave., Cleveland, Ohio.
Continental Tire Co., 1200 South Main St., Los Angeles, Cal.
Jas. L. Gibney & Bro., 211 No. Broad St., Philadelphia, Pa.
Neustadt Automobile & Supply Co., 3948 Olive St., St. Louis, Mo.
Plant Rubber Co., 322 First Ave., No. Minneapolis, Minn.
Revere Rubber Co., 700 Baronne St., New Orleans, La.
The Post & Lester Co., 821 Boylston St., Boston, Mass.
175 Asylum St., Hartford, Conn.
Western Continental Caoutchouc Co., 1438 Michigan Ave., Chicago, Ill.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 30, 1908

Advantages of Displacement Exemplified.

Even a casual glance at the characteristics of the cars which competed in the Briarcliff race furnishes convincing evidence of the absurd methods of engine rating extant among the makers. It also supplies a good argument for the method of rating by piston displacement. Comparison of the figures representing nominal horsepower with those indicating the piston displacement shows a variation which is too extraordinary to be accounted for by any eccentricities of design. Had not the event been a "stock car race," such differences might have been reconcilable to the desire of certain makers to practice the greatest possible fuel economy, and of others to develop the maximum possible power regardless of that factor. With the limitations which are supposed to exist in the design of engines for touring practice, however, the more charitable supposition of the two which are possible is to credit a large proportion of the makers with extremely liberal ideas as to what horsepower really is.

Reducing the figures obtainable from the entry blanks to terms of piston displacement per nominal horsepower, it is found that the machines entered had cylinder capacities varying from a trifle over 1½ cubic inches per horsepower up to 3 inches and a little over. To see one car with double the rated horsepower of another, yet with only 5 inches more cylinder capacity at once leads to the conclusion that something is radically wrong with the system of rating, and so far wrong that some remedy ought to be discovered and applied without delay.

It is true that displacement alone is not a measure of the possible performance of the car, nor, strictly speaking of the engine itself except in a limited way. With cars of any given class, however, as in this case, the ratio of engine power to car weight, and of displacement to power output, should be so far reduced to a common denominator as to yield at least one term upon which a just rating could be based The contention frequently has been advanced by the Motor World that the piston displacement furnishes just this desideratum. Certainly it is justified by the results of this contest wherein cars ranging in nominal output from 30 to 60 horsepower, and all designed for touring purposes, or at least for road service, proved to be on a pretty nearly even footing.

The inflexibility of the displacement figure is its greatest advantage. By the ease with which it may be checked, all jugglery is barred, and even though it is not a measure of horsepower it is so nearly a measure of it as to be more suitable than horsepower for use in connection with competitions, as it is for general use in the makers' catalogues. Every man understands the meaning of inches; only the technical understand the meaning of horsepower.

Concerning the Change Speed Gear.

In the location of the change speed gear and its relation to the parts which it connects, a gradual change is taking place which is more general than might be supposed by the casual observer, and none the less marked for being unaccompanied by the trip-hammer racket of press agency. Excepting the question as to whether four or six cylinders are more suitable for use in touring car practice, the industry is at present quite barren of the causes for technical argument which one time furnished it with so much of the spice of life. The situation in regard to change gear position, is only one of several examples of the newer trend of things in which the owner pays less attention to the design of his car than formerly, and more to its performance. Like the problem of the final drive and the relative advantages of solid and live axle constructions, change gear design is being thought out and worked out slowly, but progressively.

Originally, the change speed gear was an element by itself, like the differential, and independently mounted and controlled. Later, it came to be associated in combination, either with the motor in the unit power plant, or with the rear axle group in the unit transmission. Compactness, interchangeability and facility for making repairs, were the principal causes leading to the adoption of one or the other of these systems until at present, a very important contingent of the makers have espoused one or the other. Without going into their respective merits, it is plain to see further, that both stand on a common footing in that they serve to eliminate the several undesirable features which the independent and centrally mounted change gear develop. Indeed, their increased use as well as the arguments in their favor, appear to point to the ultimate elimination of the latter arrangement.

In either case, the use of a single propeller shaft running a considerable distance is made possible, thus reducing the angular displacement of the universal joints, and so cutting down wear, and the strain on the parts due to irregularity in transmission through the joints when disaligned; in both, the parts are made more accessible, more readily demountable and more perfect mechanically speaking; and in both the use of universal joints between the motor or clutch and gear box, in addition to those between the gear box and the rear axle, is done away with. Another bad feature which is also eliminated is the noise of the gears which, especially in the case of limousine cars, is made particularly objectionable because of the resonance of the body. With the gears mounted in the fore part of the car, or on the axle, where the springs are between them and the floor of the body, the clatter and ringing of the transmission is reduced to an almost negligible degree.

These arrangements are peculiar to the gear driven car, of course, and the tendency to a clearing away of the middle portion of the chassis thus may be said to be peculiar-

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ly an effect of the shaft drive. Even so, in one or two cases even the chain driven car has been made subject to a unit power plant design, with only the differential housed in the counter shaft casing, so that the movement cannot be attributed exclusively to that source. The rivalry between unit transmission constructions and unit power plants, has not become as strong as it is likely to within a year or two. But whatever arguments may be advanced in favor of either, it should be borne in mind that they have at least one common advantage.

Earning Customers' Good Will.

When a man spends a sum of money for an automobile, whether the expenditure is $500 or $5,000, he expects something more from the agent than the tools and accessories with which the car is equipped. The buyer expects—that the expectation is justified—that the dealer from whom the car was bought will have sufficient interest in the welfare of his patron to sincerely cooperate with him to the end of obtaining the best results in the use of the new car.

While any salesman will answer the questions which may be asked him by the buyer, too often the latter has so little knowledge of the mechanism and design of his new car that he fails utterly to bring up the questions that are of first importance. The result is that he experiences a number of mishaps which easily could have been guarded against had the interest of the salesman, in the welfare of his client, been sufficiently sincere to have prompted him to do a little more than was asked by giving the customer enough time and attention to properly instruct him in the construction and operation of the car.

It is short-sighted policy on the part of a dealer to strive merely to get a customer's money. His good will is valuable and while "hell hath no fury like a woman scorned," the automobile agent has no critic like the neglected customer.

Automobile dealers would do well to adopt the policy of one of the best known and most popular of legislators. He was approached one day by a constituent and asked for a card of admittance to the floor of the senate. By way of complying, he made out two cards, which he handed to the applicant, with the terse remark: "You may want to use both." As the recipient of his favor passed out of hearing, the legislator, turning to his friend who had witnessed the occurrence, said, "when I gave him one card, I gave merely what he asked for and what he was entitled to, and he accepted it as his right; when I gave the second card, which he had not asked for, he appreciated my interest in him and felt under obligation to me. I find it a good principle to do a little more than is asked of me."

Problems of Commercial Vehicles.

Manufacturers of commercial motor vehicles are wont to deplore the difficulties in the way of successful operation of their product which are caused by the difficulty of obtaining satisfactory service from drivers. In some cases they even go to a point further and complain of the difficulty of securing competent operatives for the road testing track. Men who are competent to drive and handle cars of any sort, prefer to drive lighter and more speedy machines, they say, and consequently unless closely watched, will tend to shirk their work when put on the commercial machines, and in many cases "pass them up" long before they are in proper working condition, simply from lack of interest in the undertaking. This is doubtless a very real difficulty, but the root of the matter lies not so much with the men themselves as with their employers.

As was pointed out in these columns not long since, the user who is unable to obtain satisfactory service out of commercial vehicles which are of standardized make, must be in some way at fault himself, since others, with similar equipments, are able to obtain paying results from their use. So with the producer of the vehicle. If he is unable to obtain faithful service from his test crew and if his customers also complain of high maintenance cost and labor troubles as well, it is more than likely that the difficulty might be solved by a little attention to detail both in the draughting room and the superintendant's office.

The machine which is properly designed according to the best rules of modern practice, such as are available in every well-equipped manfacturing establishment, is not likely to give any great amount of trouble either under test or afterward, so long as it is run under thorough supervision. Provided the design is good, the only other possible cause of trouble in testing must arise through carelessness in assemblage. The car which is well designed and thoroughly built, if tested under a close system should give so little trouble that the work should be in no way repellant to the competent mechanic. Hence, if paid a proper wage, there ought to be no difficulty in securing men for the test crew who would work in well.

As for the dissatisfied customer, under these circumstances, there are two possible sources of his discontent. One, that the vehicle is not suited to his needs, and the other, that he is not sufficiently good an executive to develop the proper returns from it. The maker who is sure of his product, should have no difficulty in locating such a fault, nor, if he be at all wise, in pointing it out to the unsuccessful owner. Where complaints of this nature exist, both the cause and the remedy are not far to seek. Generally speaking, the successful maker is not long in ferreting them out and correcting the underlying evil. The maker who, on the contrary, continues to complain of labor troubles or of the thickheadedness of his customers, is pretty apt to be on the wrong track. He should look to his design and to the manner of its execution first, and complain afterwards.

COMING EVENTS

April 29, 30 and May 1, Detroit, Mich.—Detroit Automobile Dealers' Association's three days' reliability run to Saginaw, Kalamazoo and return.

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

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STRANG WINS WHILE MOORE SLEEPS

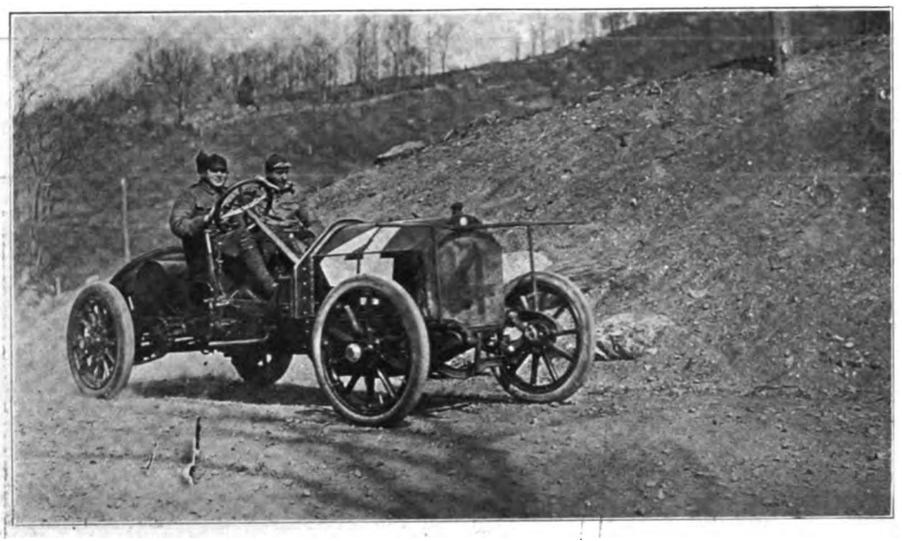


1. HILLIARD "RAISES THE DUST." 2. HOW MOTORCYCLISTS PILOTED COMPETITORS THROUGH MT. KISCO CONTROL.
3. WHEN LYTLE PASSED CEDRINO EARLY IN THE RACE. 4. POOLE "SKIDDING SOME."

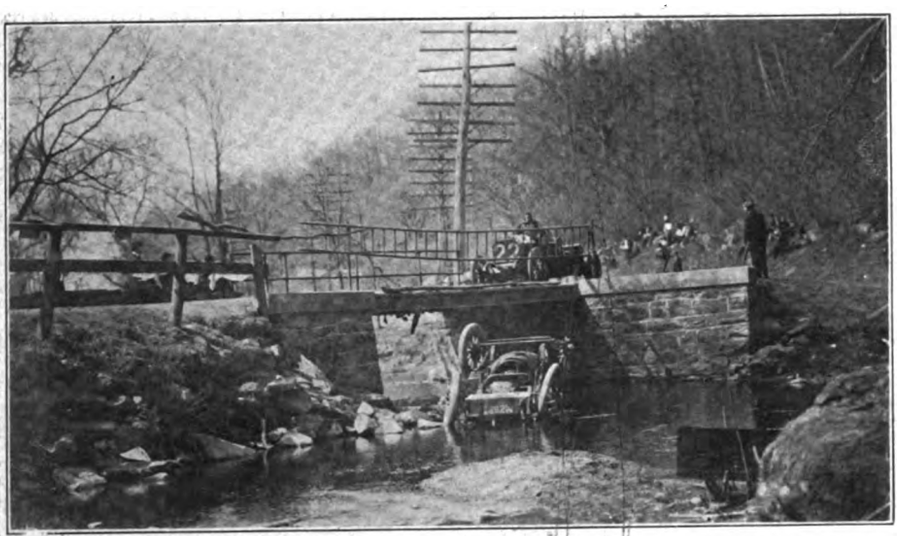
God was good on Friday morning last, 24th inst. On that day the first race for the Briarcliff trophy was run over the 32 miles corkscrew circuit in Westchester county, New York, and contrary to all dire predilections, the services of neither the coroner nor the undertaker, nor even the ambulance surgeon, were once called into requisition. The absence of serious accident was the most remarkable feature of the day.

The race was won by Louis Strang, an American driving an Italian Isotta car, but

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STRANG WITH THE RACE WELL IN HAND.



"THE QUICK AND THE DEAD"—WATSON SPEEDING OVER THE BRIDGE OFF WHICH A CAR PLUNGED THE DAY BEFORE.



THE DRIVER DOES NOT TAKE ALL THE RISKS.

readers of advertisements that since have appeared in the daily press, may be pardoned, if, despite the official record, they have a confused idea as to whom the victory belongs. The importers of the other cars that competed, and at least one American house, have each figured out to their own satisfaction, the marvelous glory that can be squeezed out of a near-triumph, or even out of one that is not remotely near. The figure jugglers and word-compounders have paid large sums for generous space and black type to impress the public with the fact that they did everything but win the cup.

Strang, however, was the only real winner. His victory was achieved on the road and not in the advertising columns. He covered the eight laps—259 miles—in 5 hours 14 minutes 13⅕ seconds, an average of about 48 miles an hour—speed which surprised, astounded every one familiar with the twists and turns of the "wriggly" course of indifferent roads. Second was Emanuel Cedrino, on a Fiat car, in 5 hours 21 minutes 5⅖ seconds. Strang started fourth and finished first; Cedrino was second away at the start and finished in the same position. The next two finishers were Americans in American cars, respectively, Guy Vaughn, Stearns, in 5:28:29⅖, and Herbert H. Lytle, Apperson, in 5:39:15⅖.

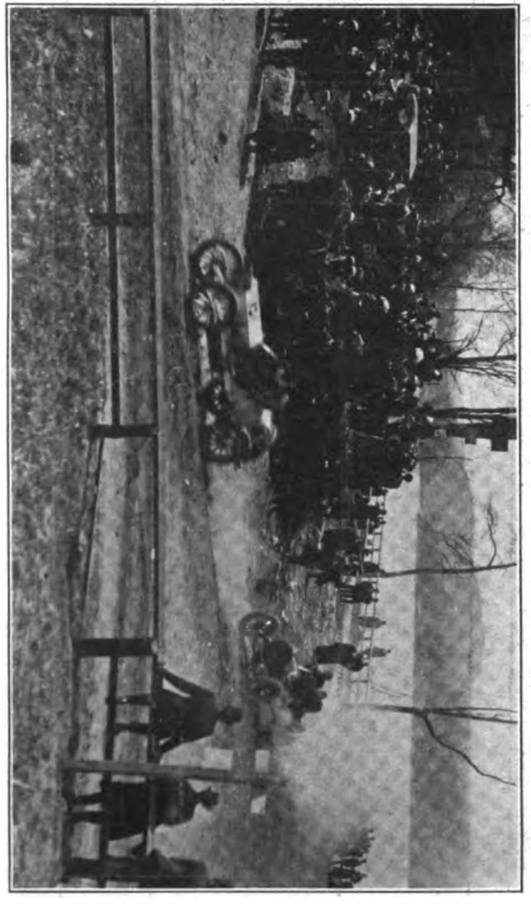
To whom fifth position belongs is a matter of conjecture. Paul Sartori driving a Bianchi, finished in that position in 5:53:45⅕, but J. Morton Seymour, Simplex, drove his car across the finish line shortly after the finish of Sartori, and inasmuch as Seymour started in 21st position, twenty minutes after Sartori, who finished only eight minutes before him, logically the place belongs to Seymour. Following this line of reasoning sixth position apparently should go to Frank B. Leland, Stearns, who started four minutes after Sartori, and finished less than four minutes after the Italian crossed the line. Sartori, who was given fifth position after the premature stopping of the race after this number of cars had crossed the finishing line, apparently should be in seventh place. Whether the position will be changed is a matter for the racing board of the American Automobile Association to decide. It is considering the protests.

A few minutes before Strang dashed over the line that marked the finish, it was announced that after eight cars should have finished the race would be declared over. Strang, Cedrino, Vaughn, Lytle and Sartori finished in succession, and in an instant following the passing of the latter, the narrow roadway was blotted out by the swarming over it of spectators and cars. The yellow flags, significant of danger, were displayed The race was over. At that moment Seymour and Leland were flying around toward the finish on their last lap. With the course choked with humanity and machines they had to thread their way to the grand-

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HOW THE RACE FOR THE BRIARCLIFF TROPHY WAS RUN AND WON.

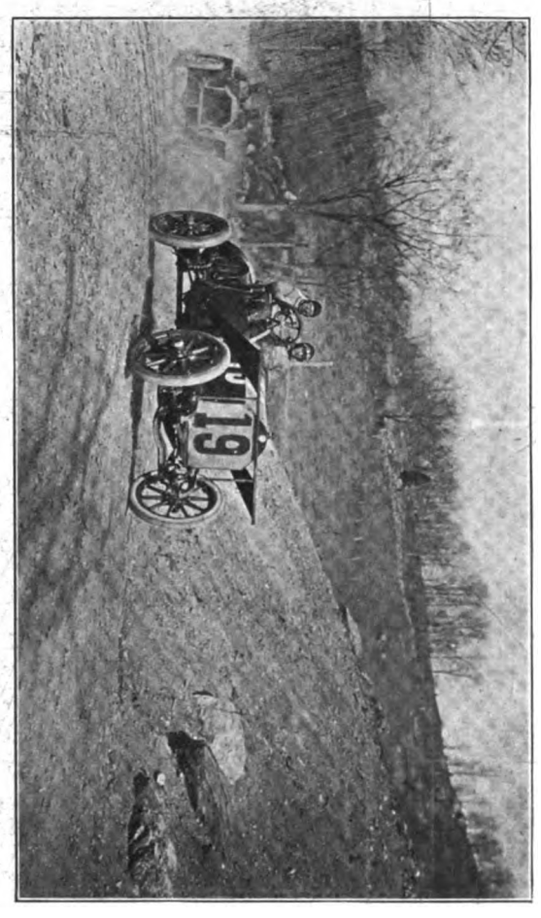
Pos.	Driver.	H.P.	Car.	Piston Displ.	Order Start.	32.4 Miles. 1 Lap.	Pos.	64.8 Miles. 2 Laps.	Pos.	97.2 Miles. 3 Laps.	Pos.	129.6 Miles. 4 Laps.	Pos.	162 Miles. 5 Laps.	Pos.	194.4 Miles. 6 Laps.	Pos.	226.08 Miles. 7 Laps.	Pos.	259.2 Miles. 8 Laps.
1	Lewis Strang	50	Isotta	102.38	4	39:42	1	78:05	1	117:23	1	156:02	1	194:40	1	235:04	1	273:47	1	5:14:13⅕
2	Emanuel Cedrino	60	Fiat	95.03	2	45:01	13	85:04	6	125:13	6	169:37	5	209:32	5	247:01	3	284:17	2	5:21:05⅖
3	Guy Vaughan	30	Stearns	90.72	8	42:12	7	82:27	4	122:10	3	166:06	3	207:56	4	246:47	2	289:39	3	5:28:29⅗
4	Herbert Lytle	50	Apperson	103.86	3	41:00	2	81:47	3	123:48	4	166:59	4	207:35	2	248:11	5	287:36	4	5:39:15⅖
5	Paul Sartori	50	Bianchi	82.48	1	48:15	16	91:39	11	135:58	12	183:03	11	227:34	10	269:51	8	311:46	8	5:53:45⅕
	M. J. Seymour	50	Simplex	103.88	21	39:56	3	80:27	2	120:32	2	172:20	6	212:16	6	251:32	6	290:50	5	
	F. W. Leland	30	Stearns	90.72	5	43:16	6	85:17	7	126:21	7	176:30	8	215:44	7	260:50	7	301:03	6	
	A. Poole	50	Isotta	102.38	11	41:03	4	85:57	10	125:00	5	165:59	2	207:50	3	247:39	4	302:20	7	
	H. N. Harding	50	Isotta	102.38	19	43:54	10	95:25	16	138:39	14	180:27	9	227:36	11	270:16	9	314:07	9	All going well when race was stopped.
	H. Michener	45	Lozier	86.59	7	48:30	18	92:47	14	139:08	15	181:21	10	223:35	8	271:24	10	315:34	10	
	Barney Oldfield	30	Stearns	90.72	13	43:47	9	85:26	8	126:41	7	186:38	14	227:53	9	276:39	11	322:48	11	
	W. M. Hilliard	40	Hol-Tan	72.38	16	46:00	14	92:04	12	137:45	13	183:40	12	231:28	12	278:07	12	328:14	12	
	Julian Bloch	30	Renault	86.59	18	48:16	17	94:04	15	140:38	16	186:27	13	236:01	13	283:20	13	330:22	13	
	L. J. Bergdoll	60	Benz	103.00	20	52:02	19	97:20	17	141:58	17	194:18	16	238:45	14	284:05	14	338:35	14	
	M. Roberts	60	Thomas	95.03	12	52:35	20	102:48	18	153:05	18	202:12	17	240:32	15	295:05	15	342:36	15	
	Maurice Bernin	30	Renault	86.59	14	59:38	21	109:01	19	156:49	19	203:29	18	253:56	16	300:47	16	358:03	16	
	George Robertson	50	Panhard	103.86	15	47:48	15	110:32	20	163:10	20	223:30	19	79:05	17	328:01	17			
	William Watson	50	Simplex	103.38	22	175:31	22	221:11	22	261:18	22	303:10	20	328:20	18					
	Ralph de Palma	35	Allen-Kington	78.54	17	43:33	8	85:36	9	130:17	10	173:11	7	Ditched near Kensico.						
	Ralph Mulford	45	Lozier	86.59	9	44:17	12	92:33	13	135:37	11	190:36	15	Ditched near Kensico.						
	D. S. Murphy	30	Maia	58.92	10	41:31	5	82:27	4	127:18	9	Broke a wheel near Eastview.								
	E. H. Parker	60	Fiat	95.03	6	44:09	11	116:21	21	176:52	21	Broke rocker arm of cylinder.								



CEDRINO ABOUT TO PASS HILLIARD.

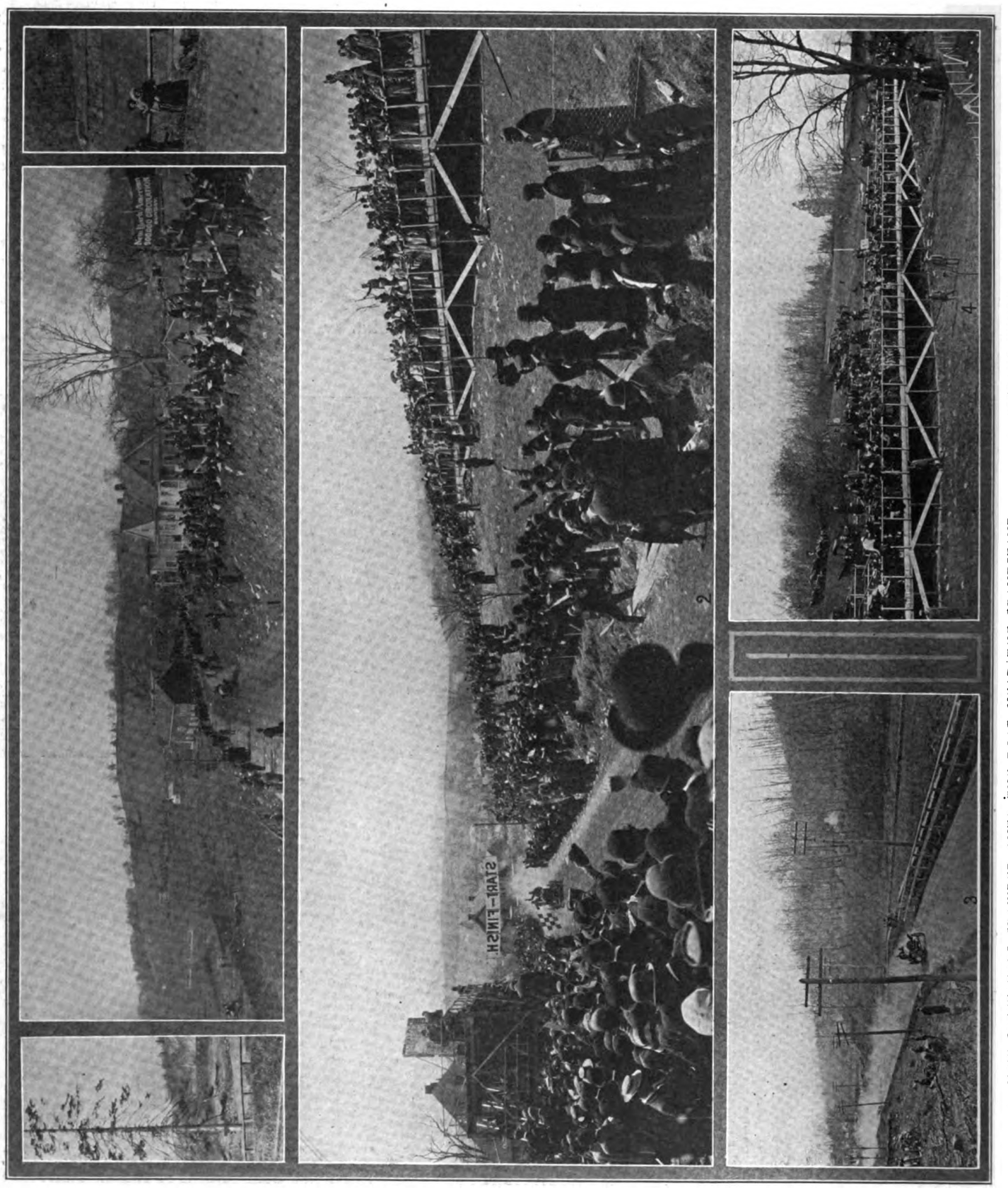


THE WRECK OF A NON-COMPETING CAR.



WHEN HARDING OVERHAULED OLDFIELD.

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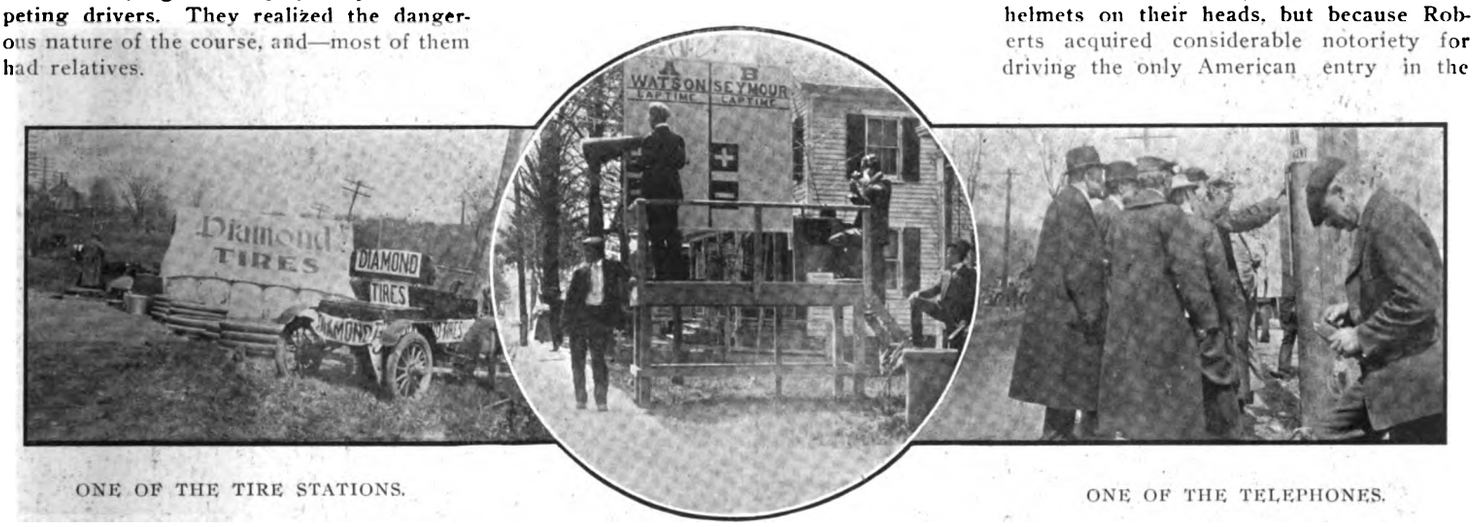


1. HOW SPECTATORS CROWDED ONTO THE ROAD NEAR THE GRANDSTAND.
2. "STRANG WINS."
3. ROBERTS "LETTING OUT A LINK."
4. THE GRANDSTAND FULL OF EMPTINESS.

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stand, a delaying process that lost valuable minutes for them. Both finished but the officials did not take their times. Why, no one seems to know. Whatever the excuse it would appear that fifth and sixth places, rightly belong to Seymour and Leland, respectively.

It was a remarkable race. Of the 22 starters, only four cars were eliminated. When the seven cars had finished ten were on their last lap, while another, driven by William Watson, who had been put out of the running for a time, was still plugging along, though several laps behind. It is a tribute not only to reliability of the present day stock car construction, but to the careful judgment displayed by the competing drivers. They realized the dangerous nature of the course, and—most of them had relatives.



ONE OF THE TIRE STATIONS.

SIMPLEX SIGNALING STATION.

ONE OF THE TELEPHONES.

The start of the race from the grandstand at Briarcliff Manor bore a similarity to the starts of the several Vanderbilt cup races on Long Island in every respect save one—there was not the great crowd at the race as have made memorable the Long Island contests. There were not hundreds of thousands of spectators, and of the total number who witnessed the race, the percentage at the grandstand was smaller than at some other portions of the course. At no time was the grandstand in danger of collapsing from overloading; in fact, few more than the box seats were filled. To begin with it was in a bad location, a half hundred feet back from the road, and people could not be blamed for not paying fancy prices for hard board seats when they could witness the passing of the cars much better from the more comfortable seating of their touring cars. If the grandstands had been moved up the hill 50 yards the spectators would have been able to watch the cars for nearly a mile after leaving the tape, but from information gleaned from disinterested persons it was learned that the ground at the very top of the hill, where the stand should have been, did not belong to the man considerably interested in the contest. What was true of the official stand half way up the hill is equally applicable, but to a greater extent, to the several immense stands that had been erected on private property south of the start and finish line. The noticeable feature of these stands was their emptiness.

So many touring cars and pedestrians were on the course at 4.45 o'clock, the official time for starting the race, that it did not actually begin until more than three-quarters of an hour later. Fortunately, there was not a hitch in starting when once the first car was given the word, and at intervals of one minute the remaining 21 contestants began the long and wearisome ride.

It was exactly seven minutes past five when Starter Fred J. Wagner counted off the seconds and gave the word to Sartori, in the Bianchi. Sartori wore a black sweater and Meyers, his mechanic, looked warm in a rubber coat. Emanuel Cedrino and Carlo Catra next breasted the tape in their red painted Fiat; both men wore helmets and red sweaters, with the name of the car in white letters on their backs. Third away was the high-geared Apperson, also painted red, with Herbert Lytle at the wheel and George E. Davis in the seat beside him. Lytle got a big hand when he threw in the clutch and the big machine started feverishly up the incline. Strang and his Italian car were regarded critically when they came up to the line. This young man had suddenly jumped into fame only a month or so ago when he won the great stock car race at Savannah, and the car commanded notice from the fact that it was rigged up with a peculiar arrangement of gas pipe on the front, which Strang explained was to prevent any stray dogs that happened in the way from being thrown up in his face. John B. Marquis was in the mechanic's seat.

Frank W. Leland and Charles Schlipp, his mechanic, were both garbed in black leather suits, as they brought the Stearns, No. 5, to start. Edwin H. Parker, Fiat, was sixth away. Harry Michener and Anthony Ross presented the most picturesque appearance in the long white Lozier. Both men were attired in white from head to foot, including white helmets, from the peaks of which defiantly fluttered long white streamers. Guy Vaughn and Joseph Crawford, Stearns, were eighth away at exactly 5.14 o'clock. Ralph Mulford was at the wheel of the other Lozier car, which started next, and both he and Harry Cobe, his mechanic, were dressed similarly to Michener and his helper.

Daniel Murphy and J. M. Ulrich (Maja), Alfred Poole and T. M. Pepperday (Isotta), Montague Roberts and A. C. Guichard (Thomas), followed in this order. Roberts and his mechanic attracted as much attention as any crew in the race, not alone from the fact that they wore regulation foot ball helmets on their heads, but because Roberts acquired considerable notoriety for driving the only American entry in the New York-Paris stunt as far as Wyoming.

Whatever the attention Roberts received from the grandstand crowds just as much was focused upon Barney Oldfield, at the wheel of a Stearns. Oldfield, whose daring on circular tracks has made his name known all over the world, was making his debut at road racing, and there were not a few that predicted his early demise. How well the wise prophets went astray subsequently developed. Besides this fact Oldfield nonchalantly chewed a cigar butt, an unfailing habit of his track driving, and braved superstition by driving a car with the number "13" painted on its radiator. Oldfield had trimmed his car with splotches of green paint to make it resemble as nearly as possible his famous old "Green Dragon" car. In the seat beside him was Charles Soules, another famous track driver.

Maurice Bernin (Renault), was the 14th starter, and in succession followed George Robertson (Panhard), with Paul Fleury in the mechanic's seat; W. M. Hilliard and Frank Townsend (Hol-Tan-Shawmut); and Ralph De Palma, who had been substituted as the driver of the Allen-Kingston car after A. C. Campbell, the original nominee, had been injured when the car ran off the course during practice the week before. De Palma was to have been the mechanic, but Rippengill occupied that minor role.

Julian Bloch and Charles Godard (Re-

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nault), were the eighteenth away, followed by Hugh N. Harding and L. M. Anderson (Isotta); Louis J. Bergdoll (Benz); Morton J. Seymour (Simplex), and William Watson (Simplex). The last car left at twenty-eight minutes past five.

Then the crowd settled down to await results. Predictions were freely made, and one or two bets involving an outlay for soda water were made by excited Italian day laborers that Cedrino would be the first to pass the grandstand at the finish of the first lap. From Briarcliff to Kitchawan is 6 miles, and to Pine Bridge 7 miles, while Mt. Kisco, where the only control was situated, and through which the cars had to take ten minutes to pass, is 11 miles from the start. It was thought that the first telephone bulletin would be sent from Mt. Kisko, but the first of the meagre reports that finally reached the official stand was that Vaughn had passed Michener at Armonk, 17 miles. The next announcement was that Cedrino had passed Sartori at Valhalla, 22½ miles. Soon after it was heard that Cedrino, Sartori, Lytle and Strang had passed East View, 26¼ miles, in this order.

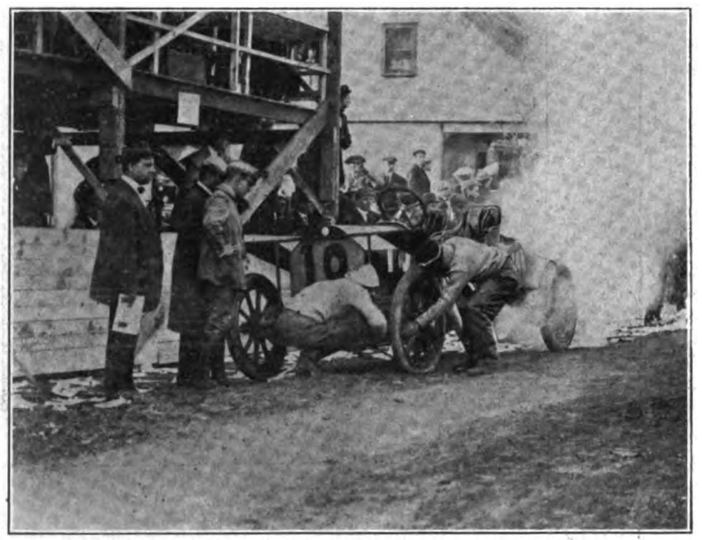
Perhaps the most dangerous turns of the course were at East View, where also was a railroad crossing, which was blocked every once in a while by a slow moving special train from New York. Incidentally, these special trains of the New York Central and Hudson River Railroad broke all speed records in getting to the course. Briarcliff Manor station is only a few more than 30 miles from New York City, but it is an actual fact that the train which left Grand Central at 3:15 a. m., did not reach Briarcliff until exactly twenty minutes after seven o'clock.

Because of the serpentine twists of the course just south of East View several thousand spectators, in search of thrills, congregated at this spot. The most spectacular accident of the very few in the race came in the first round. The road at East View describes what might be called a continuation of nightmareish curves and then some. The twists looked easy from the top of the hill, and one would not know the difference until the centrifugal and centripetal forces began a duel when the car started to wiggle around them. Most of the drivers realized the danger at this point and slowed up before they struck the loops. William Watson, the last man to pass on the first round, didn't, however. The preceding cars had worn a rut in the roadway, and when Watson came whizzing down the hill and ran onto the first curve the outside wheels of his car settled into the rut. Watson instinctively knew that he was "in bad" and threw on the brakes, but the speed was too great to be overcome in an instant. As the car reached the curve and the front outside wheels jammed against the rut it was natural that the opposite side should begin to rise, following the first principles of motion. Watson realized his danger and cut out power entirely. The instant he did so the car was describing a flip-flop, and Watson and William Cotter, his mechanic, were looking for a soft landing spot. They found it, and the car settled down bottom side up. Later Watson got the car righted and started in the race, but it was after half-past eight when he passed the grandstand the first time, the leading cars at that time being on their fourth round.

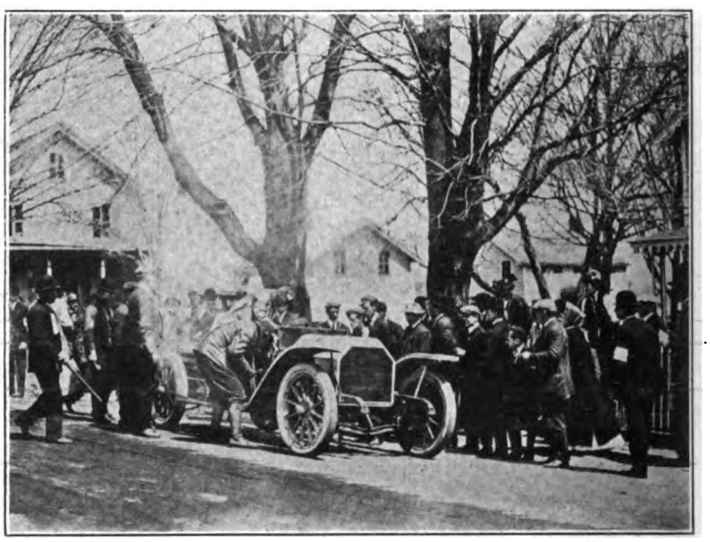
Strang must have done some fast driving in the 6 miles from East View to the grandstand. At that place he was in fourth position, and passed the other three cars before reaching Briarcliff for the ending of the first lap. He passed the stand at 5:59:42, having taken 49 minutes 42 seconds to cover the 32.4 miles, which, deducting ten minutes for the Mt. Kisco control, made his actual time for the lap 39:42. Lytle was only 18 seconds behind. Three minutes later came Cedrino, going great guns, and two minutes back of him, Sartori. The crowd saw some action when a tire of Sartori's machine gave way, just after passing the stand. In order came Parker, Vaughn, Murphy, Poole, Leland, Mulford, Michenor, Oldfield, De Palma, Seymour, Hilliard, Robertson, Harding, Roberts, Bloch, Bergdoll, and Bernin—all save Watson, the first unfortunate. Next to Strang, Seymour made the most sensational run, covering the lap in 39:56, actual time, and jumping from next to last position at the start to 14th place at the ending of the first round.

One or two flashes of near excitement amused the spectators during the early hours of the race. One came when the sheriff of Westchester county made a raid on the gambling lay-outs that had been set up back of the press stand. The cappers were "roping in" a lot of innocent countrymen when the big sheriff and his bristling black moustache took a hand in the game. The fakirs were run off the course and the sheriff and his deputies amused the crowd by smashing the rough pine tables with axes.

The militiamen who had been enlisted to keep the course free of spectators were more in the way than of real service. Most of them were mere boys, who apparently had small idea what they were there for. At one time when some one passed a bottle of beer among several of the "volunteers" stationed at the grandstand and, not being used to such strong beverage before breakfast, they began to think themselves excruciatingly funny, and amused themselves by hitting bystanders toes with the canes with which they had been "armed" by the promoters of the race. One of the youngster guards—they were not in uniform—got into a fight with Magistrate Kernochan of New York City and was belaboring him over the head with a cane when District Attorney Jerome, who was with the magistrate, interposed. The over-zealous "soldier" guard received a black eye.



HILLIARD PUNCTURES AT GRANDSTAND.



LELAND STOPS FOR REPAIRS.

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This incident almost started a free-for-all fight among the guards until several uniformed Pinkerton men put the entire company of soldiers to flight. A few minutes before this incident Starter Wagner got into an argument with a chauffeur who wanted to cross the road. The two began pummeling each other until spectators interposed.

After the first round Tom Moore, the manager of the race, crawled into a tonneau of a friendly car and went to sleep. He slept like one exhausted, undisturbed by the intermittent thunder of the cars as they rolled past. It was no wonder, for Moore and Robert Lee Morrell, who promoted the race, were not sure until the last minute that the race could be run. They satisfied State Engineer Skene, who wanted cash to indemnify the State for damage that the race might cause to the roads, and it was not until late the day before the race that his demands were satisfied. Then on top of that came the announcement that the village of Greenburg had unintentionally been left out of the bond that was to indemnify the towns along the course in case of any damage caused by the race. Personal bonds were given until a cable could be sent to London to insert the name "Greenburg" in the papers. Then it is said that Moore and Morrell did not pull very well together the last day before the race, and, in fact, had had some words. So it is no wonder that Moore slept.

When Strang passed the grandstand at the ending of the second lap at 6:48:02, his total time for 64.8 miles being 1 hour 18 minutes 5 seconds, and when he still held the leading position at the finish of the third and fourth rounds the spectators began to realize that barring accident, Strang would likely prove the winner. The fight was for second place, and in the scrimmage for this position was found the only excitement of the race.

All the cars save one made the second round without incident, the fastest time for that lap being by Strang, in 38:23. Seymour, in the Simplex, had jumped into second place in point of time, with Lytle third and Vaughn fourth. Harding stopped his Isotta car at the grandstand with a flat left front tire. The young Englishman and his mechanic made a remarkably fast replacement in just 2 minutes 21 seconds. In the third round, covered by Strang in 39:18, Seymour still held second position, but Vaughn passed Lytle, and thus moved into third place.

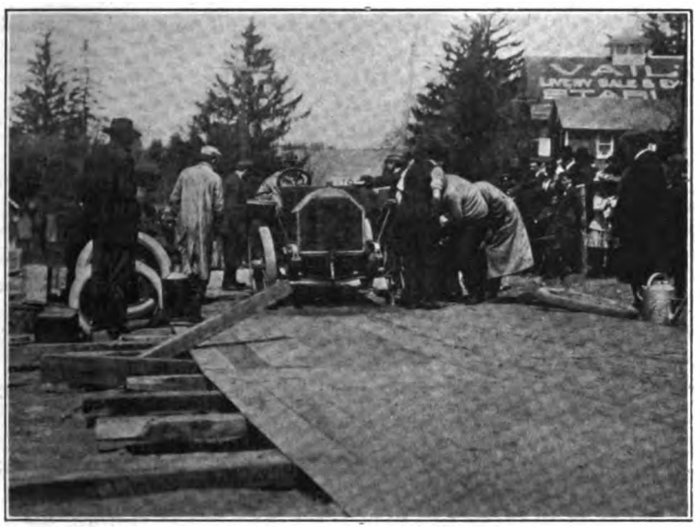
The first real excitement occurred in the third round when four cars came down the winding hill toward the grandstand together. Harding headed the procession with Mulford nosing him closely, and Parker and Oldfield were only a few yards behind. The last named made a daring swerve and passed Parker directly in front of the stand, a little byplay that caused the spectators to rise and cheer the veteran circuit chaser. This was the one illuminating incident of the race, as viewed from the grandstand.

While the cars were on the fourth round the news sifted in to the grandstand that the front wheel of No. 10 had collapsed at the schoolhouse corner, but that no one was hurt. No. 10 was Murphy's Maja. Later it developed that Murphy's over-ambitiousness to pass Sartori on the serpentine East View hill had brought about his undoing. It happened very near the spot where Watson's Simplex had turned turtle in the first lap. Sartori came shooting down the hill and close behind him was Murphy. It occurred to the Irishman that he would pass the Italian right on the curve—an attractive idea that didn't work. On the skidding side was a ditch and beyond that a stone wall. Murphy jammed the brakes when the car began to slide and this saved it from going into into the wall. It took the ditch, however, and the one of the front wheels collapsed. Murphy exercised his vocabulary to a considerable extent when he and his mechanic picked themselves out of the soft mud and viewed their lost chance. It was on the fourth round also that Parker (Fiat) retired with a broken rocker arm of a cylinder.

The positions of the three leaders—Strang, Vaughn and Lytle—were not changed in the fourth lap, but the succeeding round brought a shift, Vaughn relinquishing third place to Poole (Isotta), while Lytle moved into second place. Cedrino (Fiat) was fifth in both the fourth and fifth rounds. The fifth round also marked the retirement of two other cars, Mulford's Lozier and De Palma's Allen-Kingston. Both Michener and Mulford had tire trouble in the early laps, the former replacing three tires, while Mulford had to put an entire new equipment on. The fact that he had to do it entirely with the aid of his mechanic as the mishaps occurred some distance from a Diamond tire control, naturally made him lose much valuable time. After replacing the fourth tire, Mulford's mechanic started to crank the car, when the engine back-fired. The starting crank knocked the mechanic unconscious and he remained in that state for more than ten minutes. After that Mulford retired.

Shortly after leaving Armonk the right front tire of De Palma's Allen-Kingston gave way and before he could recover the car had run off the road and over a water culvert. The culvert bent the axle to such an extent that steering was impossible and De Palma was out of his first automobile race.

It was in the sixth round that Cedrino began to set a fast pace. Up to this time he had been driving a conservative race, but in the sixth round he took all kinds of chances. His dare-devil driving was apparent for he worked up to third position at the end of that round, Strang and Vaughn preceding him. Cedrino's time for the sixth lap was 37:16, the fastest lap of the race up to that time. Poole was fourth and Lytle fifth. Seymour, Leland and Sartori followed in order, and then came Harding.



OLDFIELD CHANGES A TIRE.



POOLE RUNS INTO TROUBLE.

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Michenor, Oldfield, Hilliard, Bloch and Bergdoll, in this order.

Cedrino's fast driving in the seventh round landed him in second place in that lap, having passed Vaughn, in the Stearns. It was just 10:53:47 o'clock when Strang passed the grandstand on his last lap, a big green flag giving him the signal. Strang slowed down somewhat for he knew he had the race won then; but not so Cedrino. The Italian flew around the dangerous curves with reckless abandon, resulting in the fastest time for a single lap in the last round, his time being 36:48⅗. At the eleventh hour, by the way, the distance was reduced from ten laps to eight.

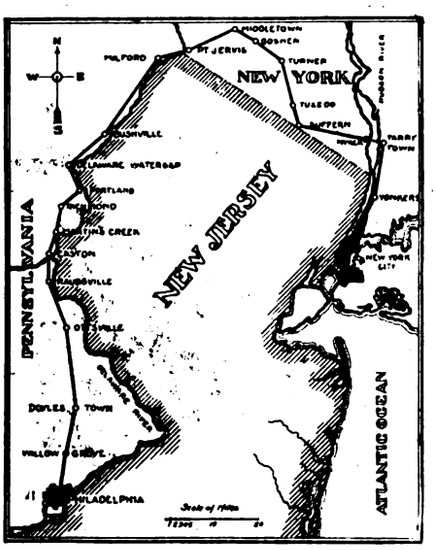
According to official time it was 11:44:13⅕ when Lewis Strang crossed the finish line, having covered 257 miles in 5 hours 14 minutes 13⅕ seconds, far better time than any one had thought possible. Less than five minutes later Cedrino thundered past. At two minutes past twelve Vaughn's time was taken, and Lytle in the Apperson followed six minutes later. It was nearly 21 minutes past noon when Sartori finished and the instant he had crossed the line the crowd broke loose, despite the announcement made a few minutes previous that the times of the first eight cars would be taken. The guards and officials made no attempt to hold them in check and the result was that Seymour and Leland, a few minutes behind, but coming on fast, had considerable difficulty in reaching the stand at all, so congested was the course with cars and pedestrians. Both the American cars that finished were fitted with Diamond tires.

The aftermath of the race took the form of the usual round of complimentary dinners, which were genuinely full of thanksgiving, because the contest passed over without a serious mishap. The first of the "spreads" took place at Rector's on Saturday night, when Guy Vaughn, Barney Oldfield and Frank Leland were wined and diner and promised special watches each, as testimonials from the firm whose cars they drove. The largest gathering assembled at the Hotel Astor on Sunday night, when 46 banqueters told Fred J. Wagner, the official starter, what a "good fellow" he truly is. In proof of their esteem they presented "Wag" with a gold split second watch. But Chairman Robert Lee Morrell came in for one of the largest wine-sprinkled bouquets that was thrown: He was referred to as the "Little Napoleon of American automobile racing," which made the Briarcliff race worth all it may have cost him. It isn't often that a driver is banqueted when he has not done anything but that was what happened on Tuesday, when a dinner was given in honor of Arthur Campbell, who was put out of the race before it was run by the upset of his car and breaking his jaw. The amusing part of it was that Campbell was still in the hospital at White Plains and so could not join in the festivities in his honor.

HOW TO AVOID NEW JERSEY'S GRIP

Johnston Discovers a New Route to Philadelphia — Longer but Far More Beautiful than Old Way.

Senator Frelinghuysen, having decided that no native shall use the roads of the State—into which he goes for the purpose of legislating when his business and home cares in New York City will permit—without paying heavily for the supposedly inherited right to use the public roads, and that no non-resident shall ride in New Jersey without paying a heavy admission



fee and securing a passport, may live to see the fruits of his "shakedown." Already they are beginning to ripen.

The Federation of American Motorcyclists had planned to spend a day on the roads of New Jersey during the annual meet in July, but since the passage of the Frelinghuysen amendments, New Jersey has been abandoned. Long Island will derive the benefit of the motorcyclists' patronage. The motorcyclists cannot see the wisdom of requiring their visitors—many of whom may never enter New Jersey again—to pay $2 for the privilege of a few hours' sojourn in that State.

Another result of Frelinghuysenism which will be appreciated by the New Jersey hotel keepers is that a route has been found to Philadelphia and other points which avoids the necessity of passing through the State which claims from $5 to $19 for the privilege of using its roads, whether for but one day or 365 days. To that indefatigable tourist, R. H. Johnston, who is chairman of the Good Roads Committee, is due the discovery of the new route which skirts the northern boundary line of New Jersey and then crossing from Port Jervis, N. Y., into Matamoras, Pa., goes in almost a straight line to Philadelphia. So far as beauty of scene is concerned, the new route is so very much more picturesque than the shorter road through New Jersey that the latter is not to be mentioned in the same breath. The accompanying map shows the route. Johnston describes his "voyage of discovery" as follows:

"Leaving New York in our 30 horsepower White steamer, we first proceeded to Tarrytown. Here we were ferried across to Nyack on the opposite shore of the Hudson. The ferry runs on practically an hourly schedule, the fare for car and passengers being $1. From Nyack we continued almost due west to Suffern, and then, turning north, we continued up the beautiful Ramapo valley, passing through Tuxedo and Southfield to Turner. Here we turned from the main north-and-south route and struck out toward the west. We made quick time through Chester and Goshen to Middletown where, turning to the southwest, we traveled via Otisville and Huguenot to Port Jervis. Much to our surprise, we found the roads up to this point almost perfect."

"At Port Jervis we crossed the toll bridge over the Delaware River and entered the State of Pennsylvania. Then commenced our ride down the valley of the Delaware. On one side of the road rise towering cliffs, strongly suggestive of the Palisades and doubtless of the same geologic origin. Far on the left, on the other side of the river, may be seen the hills of inhospitable New Jersey. The scenery is as fine as can be found anywhere within a day's ride of New York, barring, of course, the Hudson River scenery.

"We spent the night at Milford, 104 miles from New York, and the next morning continued down the valley. Thirty-three miles below Milford we came to the Delaware WaterGap, where we lingered for an hour or so enjoying the beauty of this great natural curiosity. Fives miles below 'The Gap,' at the town of Portland, the road leaves the river and then come ten miles of road where we found the first waterbreaks seen on the trip. At Martin's Creek, the road again comes back to the river's edge, and there is a fine eight mile stretch of macadam to Easton, and this river road continues another twelve miles south of Easton. Then the road bears inland and thereafter we did not again see the Delaware. After leaving the river, the scenery becomes rather uninteresting and the road is of varying character. But as one nears Doylestown the good roads begin again, and a fine macadam highway led up through Hatsboro, Willow Grove and Jenkinstown, and then along the York road into North Broad street, Philadelphia.

"We had started only with the purpose of finding a good route to Philadelphia which would not pass through New Jersey. Not only had we fully succeeded in this task, but also we had found as interesting a two-day tour out of New York City as the most exacting tourist could ask for. On the entire 225-mile trip, we found only about 30 miles of poor roads."

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ONE MORE USE OF THE MANOMETER

As a Speed Indicator It Rooled the Fledgeling Cop—How It Measured the Car's "Mileage."

"That article in last week's issue of the Motor World headed 'Varied Uses of the Manometer,' recalls a funny incident that happened to me last summer," remarked a professional chauffeur. "I found use for the manometer one afternoon which is not spoken of in the article referred to, and while my tale will sound highly improbable it nevertheless is true and can be vouched for by four people who were in the car with me at the time of the occurrence.

"I was driving a Panhard at the time. The manometer on the car had been out of adjustment for several weeks and when the engine was at rest the indicator would point to about 2 instead of 0—which was a fortunate thing for me," chuckled the speaker.

"On the afternoon in question I was indulging in a 'joy ride' with friends as passengers; we were going along one of the suburban streets at a pretty good clip when suddenly there appeared before me a youthful cop, who, with outstretched hand, signaled me to pull up. I obeyed the order and was informed that I was under arrest for exceeding the speed limit."

"The cop was little more than a kid and the newness of his uniform together with his very apparent air of serious responsibility, convinced me that he was new to the force, hence it was likely he could be bluffed. Anyway, as no harm could result from attempting to bluff him I concluded to try it.

"How fast was I going?" I asked.

"Eighteen miles an hour," was the response, as he looked at his watch as though for verification of the statement.

"Sure?" I queried.

"Sure," he responded, good naturedly. "Didn't I hold a watch on you?"

"During the conversation I had stopped the engine.

"Well, if you want me to go to the station house, I'll go, but I'm giving it to you straight, that when the sergeant sees my speed indicator he'll give you the laugh and turn me loose. Do you know anything about automobiles?" I suddenly asked, and without waiting for his reply, I continued: This is a French car, and that thing there—I pointed the the manometer—is the most perfect speed indicator in the world. You can see for yourself that there are no wheels or clumsy mechanism connected with it—just a pipe that goes straight to the engine. And you can't change that to save your life," I added in a tone of conviction.

"The cop was interested and I saw that I had him guessing. We were alone on the road; no rubbernecks had come up to listen to the discussion, and my chances to win out were good.

"Do you see that hand?" I asked him, pointing to the indicator which was stationary and pointing to a spot a little less that 2. "Well that shows the fastest speed I've gone to-day, and there's no way of setting it back either. You see it points to a little less than 2 manometers, and a manometer is just six miles. The fastest I've gone to-day is about 11 miles, and any man who understands automobiles will swear to that. Now you take me in and I'll call the sergeant's attention to that manometer and you'll loose your credit for timing automobiles if you make a break like that."

"I was terribly in earnest and appeared so confident that the policeman weakened. He looked about for a minute and seeing that we had attracted no attention from others he concluded that he had made a mistake.

"All right," he said. "Go ahead; you weren't much over the limit anyway."

"I cranked the engine and off we went, happy and suppressing the howls that later rent the air, when the minion of the law was out of hearing. I'm ashamed to confess that later of that same day I drove as fast as 8 manometers an hour."

White Helps Out Wilkes-Barre.

The last obstacle to the annual Wilkes-Barre hill climbing contest was removed this week when Walter C. White, formally withdrew the protest he had made to the racing board of the American Automobile Association in connection with the climb last year. White was barred from the free-for-all event after his entry had been accepted, but as he made the fastest time of the day in a special trial, he put in a claim for the cup. The governing body upheld White and directed the Wilkes-Barre A. C. to award the prize to White. As it already had been awarded to the Matheson, which made the fastest time among the gasolene cars, the club made a compromise with White by presenting him with a gold medal and changing the inscription on the cup to read "the fastest time made by a gasolene car." The last obstacle having been removed the Pennsylvania club will announce the program for this year's climb, which will take place on Giant's Despair mountain on the morning of May 30th.

Strang to Drive in Grand Prix.

By winning the Briarcliff trophy race last Friday Lewis Strang jumped into fame which brought almost instant recognition. He was immediately engaged by Harry Houpt to drive the latter's Thomas car in the Grand Prix race to be run in France early in July, for which task Montague Roberts originally had been chosen. John Marquis, who acted as Strang's mechanic in both the Briarcliff and the Savannah races, also was engaged to act in a similar capacity in the Grand Prix race.

ONLY THREE FAILED TO FINISH

Norristown Endurance Run Proved Mere Jaunt, and Left Sixteen Clean Scores —License Plate Caused Accident.

So far as honors are concerned the first annual endurance run of the Norristown (Pa.) Automobile Club from Norristown to Lancaster and to Reading and return on Tuesday last, 28th inst., resulted in a satisfactory evenness which likely will result in the contest being run over. Of the 33 starters, but three failed to finish, and of the remainder, 16 ended the 132 miles run with perfect scores. The trophy is a valuable cup and a meeting of the tied contestants will be held next week to determine the final disposition of the trophy.

The endurance run started from Norristown at 8 o'clock, the route taking the cars over some of the best but hilliest roads in that section of the Keystone State. They all ran upon a time schedule that was easy for the first two stages, one hour and a half from the start to Coatesville and the same time from there to Lancaster, where the dinner stop was made. The roads between Lancaster and Ephrata and the latter place and Reading were such that all of the one hour and forty minutes were needed to get to Reading on time. Conditions were asy from Reading to Pottstown and from there over the homestretch to the finish.

The run was marked by two accidents, neither of which resulted seriously. One happened to F. M. Jacquith, whose Crawford car was stopped by tire trouble at Great Valley Church. Jacquith stepped back from his stooping position at the rear wheel just as Van Peacock (Packard) came along at a fast clip. A mud guard of the car hit Jacquith and he was sick for some time, but recovered sufficiently to finish the run. As the result of the front license tag becoming caught in the steering gear the Acme, driven by John L. Scull, became unmanageable near Reading and ran into a fence, disabling a front wheel. Scull was not unseated however, and the car was repaired sufficiently to finish the run.

The drivers that finished with perfect scores, and their cars, are:

William P. David, Maxwell; Van Peacock, Packard; D. F. Templeton, Reo; J. Elwood Lee, Cadillac; Frank Stretzinger, Mitchell; Charles Mann, Buick; Frank B. Wildman, Stoddard-Dayton; W. C. Longsterth, Maxwell; J. A. Beidman, Reo; J. E. Mountain, Winton; Walter Cram, Mitchell; Joseph F. Graham, Ford; A. H. Bitner, Rambler; M. B. Brown, Rambler; Harry Greenwood, Premier, and E. C. Benson. Apperson.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.

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FLAG PRESENTATION FOLLOWS FIRE

Stoddard-Dayton Workmen Celebrate Factory's Quick Rise from Ashes—Sentiments that were Exchanged.

That labor and capital peacefully can go hand in hand was exemplified last week when the employes of the Dayton Motor Car Co. presented to their employer the flag staff and flag which waves over the new concrete factory which has just been reared in Dayton, Ohio.



PRESIDENT STODDARD ACCEPTING THE FLAG.

Before the smoke of the recent fire had cleared away, the work of rebuilding the Stoddard-Dayton plant had begun. As it began to assume shape, the workmen conceived the idea of signalizing its completion by presenting an American flag to mark the quick rise from the ashes. A committee was appointed to forward the plan, which was carried out without knowledge of the company's officials, until the proper moment.

Then George Harrison, chairman of the flag committee, presented the flag and staff to the company, the flag raising being made quite an occasion. In turning over the flag to J. W. Stoddard, president of the company, Harrison said:

"May the emblem signify that all our requests be made with justice and reason and that we shall seek to secure our rights through peaceable and statesmanlike means. In short, the stars and stripes symbolize the man, who, with clear brain and skilled working hands, is step by step developing a higher and richer manhood. As employes, we wish all success and prosperity to the company for which we are working."

Mr. Stoddard received the gift and showed clearly his appreciation in thanking the men for this, another testimonial of their good wishes. He said:

"When a few weeks ago we were gathered here watching the lurid flames leap skyward, threatening with destruction this plant, sadness was in our hearts, and when morning dawned and we could see the havoc wrought by the flames, were we downhearted? A hundred times No. Every man of you responded to the call and with unswerving loyalty threw himself unreservedly to the task in hand with the result that within two days we were again producing the best car that money can build. In accepting this flag it is my desire that as often as we see it wafted to the breezes it may remind us that our interests are common, we must be partners in the business, and with each one being fair and honest with the other, the kindly spirit existing to-day will live on and on."

The Loaning of a Garage.

When the manufacturers at Walla Walla, Wash., recently decided to hold an exhibition there to stimulate interest in home products, they were in a quandary for lack of a suitable building, until the Inland Auto Co. turned over their garage for the purpose. The show lasted three days and music was furnished afternoon and evening. Bread-making contests and baby shows were special features, and although automobiles are not produced in Walla Walla, the company made the most of the occasion.

HERE'S SUBSTITUTE FOR "TAXICAB"

It Comes All the Way from China and Affords a Choice Mouthful—Chinese as Inventors of the Taximeter.

Company promoters who are in doubt as to the proprietary strength of the word taxicab, well may avoid all chances of infringement by having recourse to the significant and euphonious term "giligulicha." It would appear that the term is perfectly justifiable under the circumstances.

In an "Oriental contemporary," the Scientific American has discovered a statement to the effect that "the Chinese can prove, from one of their old richly illustrated historical works, that already in the eleventh century they were using a 'giligulicha' (or counting mile drum car) "which possessed many taxicab features.

"Judging from the several illustrations of the 'giligulicha,' contained in the famous 'Tsan-thu-hae' collection of pictures, the vehicle had one single pole or shaft, ran on two wheels and consisted of two stories," it is explained. "In each of these compartments or divisions ther was a wooden figure holding a mallet in the right hand; these mallets were arranged to strike upon a drum in the lower story, and upon a gong in the upper one. When the vehicle had traversed a certain predetermined distance, the lower figure struck the drum with its mallet, whereupon a cog-wheel made a revolution. When a distance of ten miles had been covered the upper figure struck the gong with its mallet. In some cases this Chinese taximeter car was also fitted with a compass which, owing to the total lack of landmarks and signposts, was of great value to the Celestial 'chauffeur' of that time. A magnet was also provided; it was located in a small box, and influenced a block upon which there was fastened a small jade or wooden figure the outstretched arm of which always pointed due south."

Keeping Tabs on Municipal Cars.

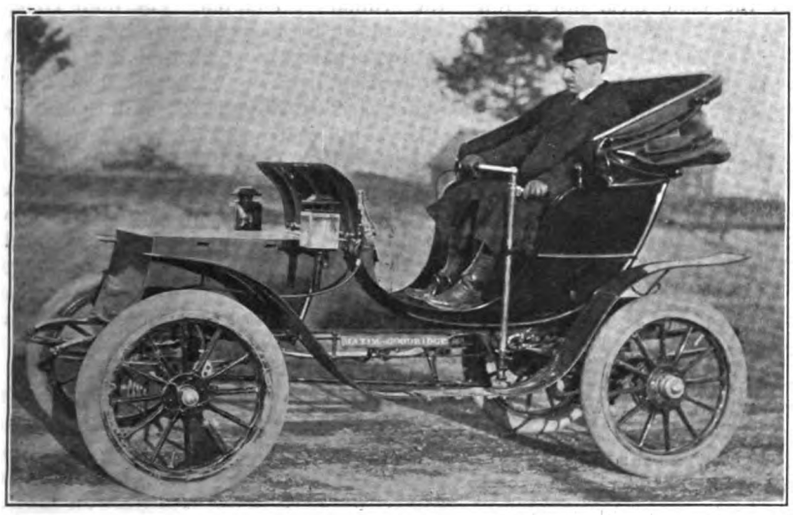
Municipal automobiles in the city of Glasgow, have been more or less subject to the nocturnal abuses which have been supposed hitherto to be a purely American characteristic in this connection, or so it would appear from the recent announcement of a proposed reorganization of the city's motor service. Hereafter, each car will bear the words, "Corporation of Glasgow," conspicuously and permanently displayed, while each will also be equipped with a speedometer and odometer. Every driver will be required to maintain a regular log book, and "show cause" for every mile traveled. Furthermore, the mileage will be debited to each department, in common with the cost of operation. ["New York (N. Y.) papers please copy."]

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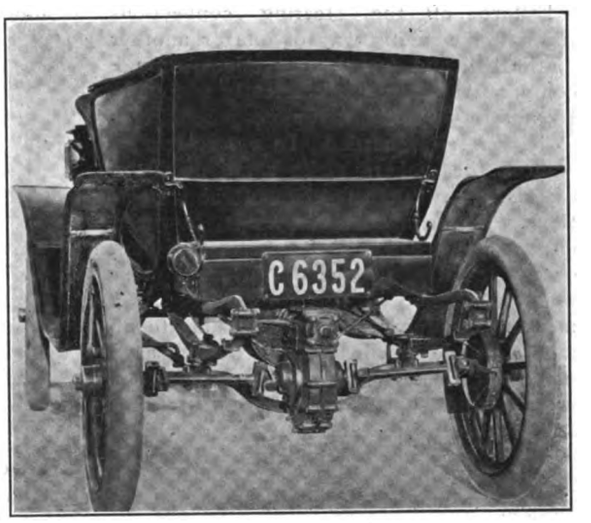
WORM DRIVE FOR ELECTRIC CARS

This, and Other Innovations Mark Maxim's Most Recent Creation—How They are Put into Practice.

Whatever may be said of the degree of individuality still apparent in the construction of other types, electric vehicles have come to be standardized to so high a degree that even a comparatively slight deviation from common practice is at once marked as conspicuously radical. On this account the long-promised Maxim-Goodridge electric victoria phaeton, which is distinctly novel in several respects, is destined to attract no small amount of attention. In fact its expected advent has been awaited with no little interest ever since Hiram Percy Maxim, one of its inventors, severed his connection with the Electric Vehicle Co., and joined with T. W. Goodridge in forming the Maxim-Goodridge Co., of Hartford, Conn., whose first product, the phaeton in question, has just been completed.



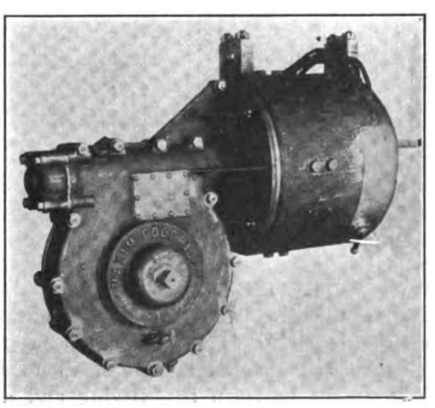
MAXIM AND HIS NEW CAR



NOVEL REAR AXLE CONSTRUCTION

Differing in a number of points from ordinary practice, perhaps the most striking departure from precedent is found in the transmission details of this vehicle. A single driving motor is employed, which is of the iron-clad type, placed with its armature running lengthwise of the car. The entire gear reduction, which is of 10 to 1, is secured by means of a worm and gear transmission, which is housed in a divided casing secured to the motor housing, the entire group being suspended from the chassis quite independent of the running gear. The drive to the rear wheels is established by means of two differential stubs which are coupled to the ends of the differential within the housing at one end, and to the wheels at the other. Each of these shafts is provided with two universal joints, to correct for disalignment due to spring oscillation. The motor and transmission unit thus formed is unusually compact, as shown in the accompanying illustrations, both individually and assembled in the car. Furthermore, it possesses the advantages of eliminating the necessity of using countershafts, chains, strut rods, and housings or adjustments for such parts, all of which are in addition to the benefits in smoothness of action and noiselessness due to the use of the increasingly popular worm drive, which is here used for the first time in electric vehicle practice.

In connection with the arrangement of the transmission, the design of the rear axle is remarkable in that it is "cranked" in order to furnish the rigidity and simplicity of the ordinary dead axle, together with the mechanical advantages in other respects of the live type. Instead of being cranked downward in the center, however, as is done in certain systems of axle-mounted transmissions, the main portion of the axle is bent forward of the housing which covers the driven and differential gearing, thus affording ample room for spring motion without any possibility of "grounding" the transmission on the axle.



MOTOR AND TRANSMISSION

The high road clearance which this construction permits, is further carried out in the arrangement of the entire vehicle, which is noteworthy for the absence of undermechanism, as well as for the uniformity of the clearance. The only visible under parts are the transmission unit, which, as before indicated, is completely housed, and the steering connections, in addition to the axles and the two stub driving shafts with their universal joints.

Another unusual feature of the machine is the method of placing the battery, which is mounted in a single group under a hood, in front of the dash board, and on the chassis level. This arrangement not only provides for convenience in handling the cells, but has been adopted, as is explained, as the only available method of equalizing the weight destribution on the front and rear axles. Instead of a variation in axle load whereby the rear axle is given some 60 per cent. of the total burden, the excess load on the rear axle is claimed to be only 35 pounds when two passengers are in the seat.

This equalization of weight, as well as the long wheel base (84 inches), and the use of very long springs, makes the vehicle sufficiently easy riding to permit the adoption of solid tires. The wheels are 32 inches in diameter, and 3½-inch tires are applied, whether of the solid or pneumatic type.

The unusual nature of the machine as a whole is completed by the adoption of a special and original type of controlling mechanism which centers about a single column mounted at the left side of the seat and running down outside the body. This comprises the steering post to which the horizontal tiller is attached above, and also an external sleeve, worked by a short handle under the tiller and actuating the controller. This arrangement does away with the need of disturbing the seat construction in order to permit the erection of the usual vertical controller handle, placing the entire controlling mechanism out of the range of possible accidental disturbance when the machine is at rest. The manner in which

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this feature has been worked out is apparent in the accompanying picture which also shows Mr. Maxim in command.

The standard equipment comprises a 30-cell, 11p.v. Exide battery, General Electric motor, and new style "uninterrupted torque," multiple series controller, affording 5 forward speeds and 3 reverse. The total vehicle weight with this battery equipment is 2,100 pounds, and the maximum speed is 18 miles per hour. On ordinary road surfaces a 50-mile radius is possible with either solid or pneumatic tires. On city pavement the radius is correspondingly increased.

Safe Guarding the Steering Connections.

Failure of the steering connections through the giving way of one or another of the ball and socket connections, though comparatively rare, is sufficiently serious in its nature—even as a remote possibility—to be carefully guarded. In a very few instances the makers make some provision of this nature in the design of the connections. In the majority of cases, however, either a great amount of wear in the joint, or the breaking of one of the arms close to it, is liable to wreck the machine. As a measure of precaution, it is possible to attach a couple of clips to the rod and arm, just back of each joint, connecting them with a helical spring of sufficient strength to hold up the rod in the event of failure in the joint, or to use a plain wire connection of a similar nature Another possible method of protection, which in many respects is even better, is to use a protecting boot for the joint, which is made of heavy leather, and is so secured that in the event of the failure of the joint the rod will be kept from falling. The looseness of the connections in such a case will give immediate warning of the need of bringing the car to rest.

Care that the Hub Caps Require.

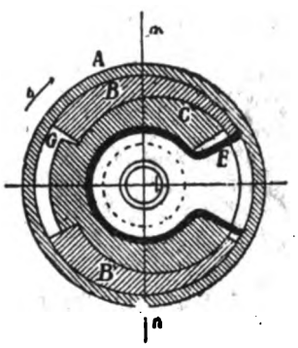
That the large ornamental hub caps with which most automobiles are equipped, have a purpose, aside from serving as ornamentation, is not known by all drivers. While these caps add to the general appearance of a car, they have also to do with the lubrication of the wheels, and their utility as a reservoir for grease probably is more the reason for their use than is the fact of the attractiveness to the eye.

When putting a car in commission, and occasionally, say every month or two, the interval depending on the amount of use the car is given, the hub caps should be thoroughly cleaned out, all the grease and verdigris removed, after which the caps should be repacked. It also is well to clean out the hubs and bearings, washing them thoroughly with gasolene so that dirt and grit will be dislodged. When this has been done, the moving parts should again be lubricated, the hubs caps put back in place and the car can be driven without fear of trouble from improperly lubricated axles.

ADAPTATION OF THE CONE CLUTCH

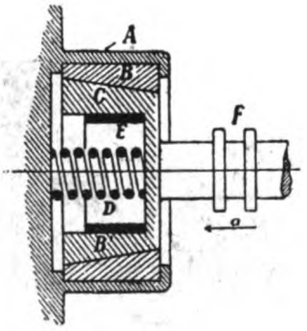
Foreign Device Which Incorporates a Double Wedging Action—Other Features that are out of the Common.

Although the principle of the plain cone friction clutch has proved to be successful insofar as the ordinary driving action is concerned, numerous devices exploiting other principles, as well as the many modifications of the cone principle itself, attest to the fact that when it comes to the action of engagement, the simple type, common as it is, leaves much to be desired. Of the modifications of the cone idea, not a few



involve a reduplication of the wedging action which is achieved in the plain cone. Of these, one of the most recent to appear in foreign practice is the Michel clutch, which has recently been introduced in France by the Atèliers Rondet-Schor, of Paris.

The Michel may be described briefly as a cone clutch of the ordinary type, but of small diameter and heavy construction, in which liners are interposed between the male and female members. Instead of being circular in section, these are of tapering thickness, and made to correspond with



similar tapering seats in the male member of the group. The effect upon entering the principal member is first of all, that of engagement between the driving and driven elements in the ordinary way. The contact thus secured is not sufficient to secure a positive contact, however, and a small amount of slip occurs. This is sufficient to cause the liners, of which there are two, to creep along the surface of the male cone sufficiently to cause their enlarged portions to jam the two elements firmly together with a powerful wedging action. This method of contact, while affording an absolutely positive and non-slipping connection between the elements, would be useless for the purposes of the motor car builder, were not the male member also coned in the direction of its length, as already indicated. This permits the mechanism to be disengaged at any time, and with no more than the ordinary tendency to seizure.

The general arrangements of the parts may be seen from the accompanying illustrations, which show the parts in end and side views. At A, is the outer casing of the device, corresponding to the fly wheel in the ordinary car clutch. The male cone, C, instead of being concentric with its axis, is made partially eccentric, and is shaped to receive the two liners or shoes, B, B', which are of aluminum, and faced with fiber contact strips. The usual helical engaging spring, D, is mounted within the device, as in the ordinary type of "inverted" cone clutch. A plate spring at E, serves to limit the travel of the liners in an elastic manner, while the stop, G, on the cone C, prevents the lower of the two shoes from exceeding its proper length of travel.

When the fly wheel or drum is turned in the direction of the arrow, the motion to engage, which merely serves to seat the cone, C, does not secure the positive driving connection because of a slight amount of play between the shoes and the drum, A. There is enough friction between the shoes and the inner surface of the drum to drag the former around the cone by a very slight amount, this motion being resisted finally by the spring, E. The effect is to wedge the parts firmly together, but with a gradual action which invariably requires a certain amount of time, and therefore invariably prevents straining the transmission. The rate of engagement is regulated to a certain extent by the quality of lubricant with which the outer casing is filled, a certain mixture of kerosene and heavy oil of just the right consistency being employed. As a safeguard against seizure of the parts, it is evident that the withdrawal of the cone in the direction of its axis may be accomplished at any time and with a comparatively slight amount of resistance, which is completely overcome the instant the clutch leaves its seat.

To Brighten the Aluminum.

For brightening the appearance of motor base, transmission case and other aluminum parts, this mixture is recommended by one who has used it:

Sulphuric acid	100 parts
Nitric acid	75 parts
Common salt	1 part

This brightens the aluminum work, giving it a finish like new, but in using the preparation, care should be exercised not to get any of it on the iron or steel work, and it should be applied only with a bristle brush.

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FRELINGHUYSENISM IS IN FORCE

New Jersey's Amended Law Operative, but Licenses not Ready—Temporary Receipts and Other Expedients Used.

Although the fact is not generally understood among motorists the new amendment to the New Jersey law, framed by the New York City representative in the Senate of that State, already has gone into effect. Like the original Frelinghuysen act, to which it is an addition, it contains many more or less involved provisions which will cause the Department of Motor Vehicles and motorists generally much annoyance unless thoroughly understood.

As soon after the law was signed and new stationery and blanks could be obtained the various agencies of the department started to issue temporary licenses which are only makeshifts until the provisions of the law can be complied with exactly. Unfortunately, the amendment did not set some future time at which it shall go into effect, thus giving the department a chance to understand its provisions thoroughly and to get in readiness to enforce them. In consequence the department has developed a temporary system which is working well.

Until the new license tags issued by the State are received, which will certainly not be before the 5th of May, the department issues a receipt to each motorist desiring to license a car not already recorded and assigns him a number. This number he may display on his machine in any legible way he choses until the tags arrive, while the receipt is accepted in lieu of a regular license.

When the license tags are received by the agencies of the department, holders of the receipts must call and receive a regulation license and two tags, which must at all times be attached to cars while operated in the State. Licenses issued now are good only up to December 31 of this year, when they must be renewed.

The new license tags now being manufactured and expected to arrive the second week in May, are blue in color, with white lettering. They will contain the license number of the machine in numerals four inches high with one-half inch stroke; the characters "N. J." and "'08," and a blank space will be provided in which will be stenciled the manufacturer's number of the car for which the license is issued. Each agency will be provided with a stenciling machine, and as a number is assigned the man taking out the license will be required to make affidavit as to the correct number of the car.

As each license issued under the old law is renewed a new number will be assigned and the requisite tags issued to accompany it. No numbers under 38,000 will be given out, so that those members of the Jersey motoring fraternity who have prided themselves upon possessing some of the early numbers will boast no longer.

A feature of the law which is finding little favor is that requiring that there shall be no transfer of licenses from the old law to the new—that is, if a man wishes to sell a car licensed under the previous act, he will be unable to transfer his license to the new owner by payment of $1 as formerly. The new owner will have to take out a license under the 1908 law as though the machine had never been licensed. If, however, a car has been licensed since the new law became operative, then its license may be transferred as before by payment of the $1 fee.

A provision which will work hardship in many cases requires that licenses under the old law expiring before January 1, 1908, shall be renewed up to December 31, 1908, at the new schedule of license fees, ordinarily required for a full year's license. An example will best show the working of this. If a man registered his car November 31, 1907, under the old law, that license is recognized up to November 31, 1908, but on that date a new license must be obtained under the provisions of the Frelinghuysen amendment just passed. This amendment, however, stipulates that every license obtained on November 31, 1908, for which full license fees were paid, becomes void on December 31, and the motorist must pay for one month's use of his car the license fees usually exacted for a full year.

Many motorists thought, after reading the provisions of the amendment, that if their cars were registered previous to June 1 of this year they would not have to display the license tags issued by the State. But such is not the case. The law is a trifle ambiguous in one place, but goes on to order definitely that after June 1 only the State tags be displayed on all cars, no matter when registered. These will be furnished by the State, without added cost, when the licenses are issued.

Motorists Escape Massachusetts Squeeze.

For the present year Massachusetts automobilists escape the additional taxation that Governor Guild thinks they should bear. In spite of the report, "no legislation necessary," made to the House of Representatives by the committee to which the Governor's recommendation was referred, an attempt was made to "squeeze 'em again," by the substitution of a bill based on the Governor's suggestions. When the bill came up for discussion Representative Bennett of Springfield described it as "Soak 'em legislation," and others joined him in such vigorous opposition that the vote was overwhelmingly in the negative. It was brought out in the course of the debate that automobile owners paid over $92,000 into the State treasury in the past year, and that the sum will be larger the present year under the present scale of fees.

NEW YORK'S BILL FAILS TO PASS

Suddenly and Unexpectedly Abandoned by Senator Armstrong—Motorists Thereby Saved from Their Friends.

Despite the efforts of the automobilists themselves, that is, those represented by the New York State Automobile Association and Mr. Shattuck's club, the Automobile Club of America, they will not be able to pay $5 or $15 per year for the right to use the public roads of New York State, nor will they be able to obtain the distinction of being posted throughout the State as criminals if they are somewhere convicted of violating any of its provisions. They must needs content themselves with having paid $2 at the time they purchased their cars, whether last year or four years ago. Also, they must be satisfied to carry but one tag on their machines, and when arrested, be content with having the record of arrest made in but the place where the offense was committed. All this is to say that the new automobile bill, fathered by the Association and more or less graciously approved by Mr. Shattuck and Lawyer Niles, who thought the size of the fees provided was entirely too small, was abandoned by its sponsor in the senate, Senator Armstrong.

The reasons which prompted Senator Armstrong to withdraw his support at the eleventh hour from the measure which he had introduced in the upper house, are not known. His action in abandoning the bill came as a complete surprise to those who had been concerned in the preparation of it, for it was confidently thought that it would be passed without change or amendment or serious opposition.

One of the results of the Senator's action will be to continue in force the present speed limitations, much to the distress of Shattuck, Niles & Co., and some others who had concluded, after much anxious thought, that unlimited speed was good not alone for them, but for the public at large.

But the bill is dead. The legislature adjourned on Thursday last.

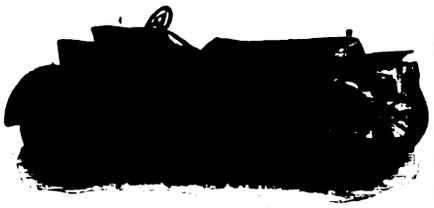
Two Days in Jail for Missing 2.

Over the head of Talbot C. Walker, of San Francisco, a junior in the Sheffield Scientific School, Yale University, there is hanging a sentence of two days in jail at New Haven, Conn. He remains at large pending an appeal of his case. The charge on which he was convicted was that of obscuring the number on his automobile, from which the figure was missing with the result of making the number 405 instead of 4052. In court at New Haven on Monday, 27th inst. Walker pleaded that the missing figure 2 had accidentally fallen off, but evidently the claim was doubted.

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This is the

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4-40 Roadster. Price, $3,000.

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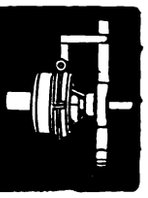
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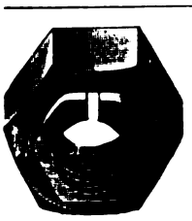
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The Week's Patents.

879,512. Internal Combustion Engine. John Braunwalder, Chicago, Ill. Filed May 16, 1906. Serial No. 317,046.

1. In a rotary gas engine, a plurality of rigidly connected pistons, adapted to rotate concentrically about a common axis, in combination with a cylinder mounted upon each piston and means for controlling the radial positions of said cylinders.

879,610. Vehicle Tire. Perry E. Doolittle, Toronto, Ontario, Canada. Filed May 17, 1904. Serial No. 208,368.

1. In combination with a vehicle wheel carrying a collapsible tire, of an auxiliary wheel rim carrying a tire and detachably secured in a lateral position upon the vehicle wheel.

879,726. Gas Engine. Joseph S. Benson, Iowa City, Iowa. Filed Aug. 2, 1907. Serial No. 386,852.

1. In an internal combustion engine, a cylinder, a crank casing, a transfer port for conveying an explosive charge from the crank casing to the cylinder, a rocker valve arranged in said port, a half time shaft, a valve actuating means operable from said shaft and serving to move the valve to open position once during each two revolutions of the crank shaft, and means for disconnecting the operating mechanism and locking said valve in open position to permit operation as a two cycle engine.

879,763. Explosive Motor. Carl R. Gergler. New York, N. Y. Filed May 28, 1907. Serial No. 376,048.

1. In explosive motors, a cylinder and its piston, said cylinder being provided with an exhaust port above the piston when the latter is at the limit of its explosive stroke, and a manually operated valve for closing said exhaust, said valve comprising a siubstantially U-shaped ring, the inner face of the ring being provided with openings adapted to register with the exhaust part of the cylinder.

879,989. Internal Combustion Engine. Herbert G. Underwood, New York, N. Y. Filed Oct. 25, 1905. Serial No. 284,271.

1. In an internal combustion engine of the compression type, the combination of a working cylinder; a piston; a tubular support carried by the cylinder head and projecting into the clearance space, said support being in permanently open communication at two points remote from each other with the interior of the working cylinder; and a gas occluding body located within said supports and adjacent the upper end thereof.

880,195. Tire Attachment. Edward Collins, Ekalaka, Mont. Filed Sept. 13, 1907. Serial No. 392,764.

An attachment for vehicle tires comprising a band encircling the tire, said band being triangular in cross section with its apex notched and outwardly presented, and fastening bolts passing through the band into the tire, said bolts having their heads fitting in the notches in the band, and shaped to extend flush with the apex and the sides of the band.

880,196. Battery. Frank A. Decker, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed March 21, 1904. Serial No. 199,304.

1. The combination of a conduit, a socket intersecting said conduit, a tube extending into said socket, and a nut engaging said tube and having a passage therein through which said tube and conduit communicate, substantially as specified.

880,202. Automobile. Allen H. Dingman, De Haven, Pa., assignor of one-half to John Sauers, De Haven, Pa. Filed June 13, 1907. Serial No. 378,842.

1. In a vehicle steering gear, a wheel hub embodying a metallic housing closed at the outer end and open at the inner end, dowel pins carried on the inner face of said closed end, a spindle inclosed by said hub and having a head on its inner end having openings to receive said dowel pins, a screw passed through said closed end into said spindle, a swivel-joint support mounted on said spindle, and provided with diametrically opposed apertured lugs, connecting rods pivotally attached at their outer ends to said lugs, means connected to the inner ends of said connecting rods for operating the same two oppositely disposed and vertically aligned bearing pins carried by said swivel support having bearing sleeves surrounding the same, and an axle bifurcated to form arms at its outer ends, the said arms being secured to said bearing sleeves, and said axle supporting the inner ends of the connecting rods and the operating means therefor.

880,212. Means for Preventing Side Slip of Motor Vehicles. Thomas B. Heathorn, Knightsbridge, London, England. Filed November 11, 1907. Serial No. 401,690.

1. An apparatus for preventing side slip of motor or other road vehicles comprising rollers with helical ribs or projections adapted to engage the surface of the road and means for supporting the rollers in contact with the road surface.

880,257. Shock Absorbing Device for

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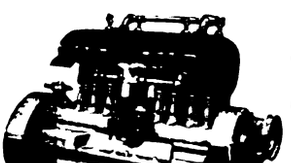
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Vehicles. Lewis C. Welch, Oakland, Me. Filed Aug. 9, 1907. Serial No. 387,886.

1. In a shock absorber for vehicles, the combination of a cylinder, a piston therein, by passes extending from one side to the other of the piston and designed to vary the resistance to the passage of liquid as the position of the piston changes and a pneumatic cushioning device associated with the piston for assisting in absorbing the shocks.

880,267. Power Transmission Mechanism. Jonathan U. Baker, Stoutsville, Ohio. Filed July 19, 1907. Serial No. 384,558.

1. In a power transmission device, the combination with a driving shaft, of a driven shaft, a friction disc mounted for rotation upon each side of said shafts, a pair of friction cones mounted to rotate with the driven shaft and adapted to engage said friction discs upon opposite sides thereof, and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said discs.

880,289. Headlight for Automobiles, etc. William D. Forbes, Morristown, N. J. Filed May 18, 1907. Serial No. 374,418.

1. The combination of a vehicle having steering wheels and a swiveled headlight with a spring tending to turn the headlight in one direction and a flexible connection to the steering wheels in the opposite direction.

880,332. Wheel Rim for Pneumatic Tires. Charles S. Scott, Cadiz, Ohio, assignor to Frank A. Seiberling, Aurora, Ohio. Filed March 19, 1907. Serial No. 363,269.

1. The combination of a vehicle wheel rim having a depressed groove near its detaching edge, an inextensible rim flange sliding over the groove onto the rim, a split locking ring sprung into the groove, and a radial projection rigidly secured to the locking ring engaging a recess in the groove to prevent circumferential motion, substantially as described.

880,367. Battery. Frank A. Decker, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed May 9, 1905. Serial No. 259,564.

1. In a battery, a cell having a base, an insulating conduit connected with said base, a plurality of compartments connected to said conduit, electrodes in said compartments, depression in said compartments which receive the bottoms of said electrodes, a conducting device extending through said base in registration with each of said depressions, and a conducting device attached to the exterior of said base in contact with each of said first conducting devices.

880,368. Battery. Frank A. Decker, Philadelphia, Pa., assignor by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed March 21, 1904. Serial No. 199,303.

1. In an electrochemical apparatus, an electrochemically active part having a honeycombed construction on each side thereof providing a comparatively larger fluid contact surface within comparatively limited borders, substantially as specified.

880,382. Power Transmission Apparatus. Charles R. Keith, Tarrytown, N. Y., assignor of one-half to John William Mason, Tarrytown, N. Y. Filed April 3, 1907. Serial No. 366,171.

1. In a power transmission apparatus, clutches, bars for shifting said clutches, a controlling lever operable to slide either of said bars, and a spring having a projection rigidly fixed thereto directly engaging the said bars for holding them at the forward and rearward and intermediate positions of their movement.

880,403. Motor Vehicle. James Ritchie, New York, N. Y. Filed May 16, 1907. Serial No. 373,905.

1. In a motor vehicle, a driving shaft provided with a clutch section, a hollow shaft thereon, a clutch section slidable on the hollow shaft for co-operation with the other clutch section, and means for moving said clutch section, comprising an annular flange in connection therewith and having oppositely beveled edges, a bracket slidable transversely of the shaft, and provided on each side of said shaft with an extension, said extension having beveled edges and engaging the opposite beveled edges of the flange, and means for moving the bracket.

880,450. Steering Gear and Axle for Automobiles. Maurice P. Henvis, Norfolk, Va., assignor of one-half to Ephraim Ball, Norfolk, Va. Filed Oct. 11, 1907. Serial No. 396,966.

1. A device of the class described comprising a sleeve adapted to mount the wheels for rotation outside of the hubs and ball bearing means for said sleeve adapted to angularly position said wheels.

880,461. Wind Guard. Henry H. McGiffin and Edward H. McCauley, Pittsburg, Pa., assignors of one-third to James P. Brennan, Braddock, Pa., one-third to W. L. Elford and one-third to said McGiffin, Pittsburg, Pa. Filed Aug. 28, 1907. Serial No. 390,536.

1. In a wind guard, a U-shaped glass frame grooved on its inner face, a grooved bottom bar having sockets for the ends of said frame, an attaching plate, and means for pivoting said bottom bar to the upper edge of said plate.

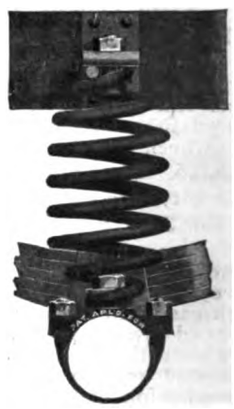
880,470. Carbid Cartridge. Edwin M. Rosenbluth, Philadelphia, Pa. Original application filed March 9, 1907, Serial No. 361,562. Divided and this application filed Aug. 6, 1907. Serial No. 387,279.

1. In an acetylene gas generator, the combination with a casing; of a carbid chamber; and a removable carbid receptacle having a chamber provided with an enlarged region arranged to prevent the improper insertion of said receptacle in said casing, substantially as set forth.

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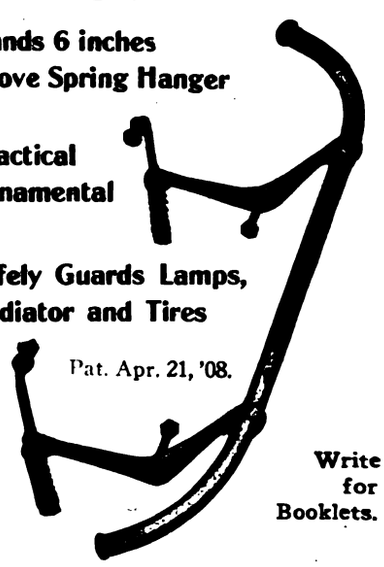
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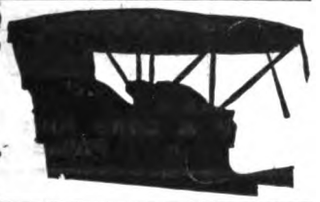
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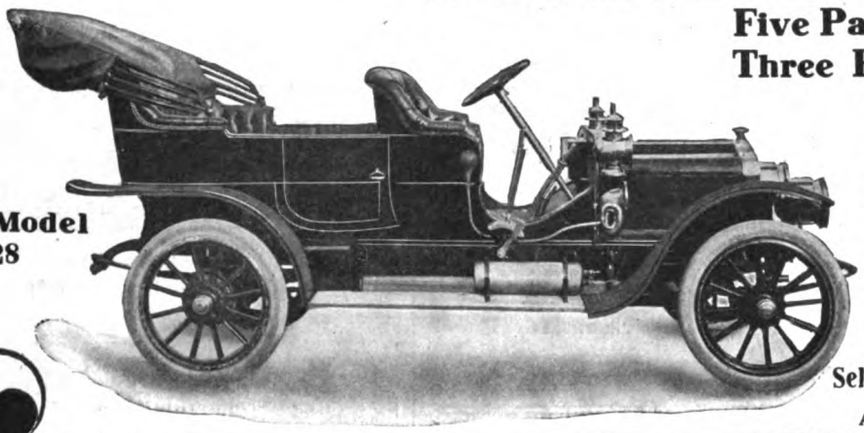
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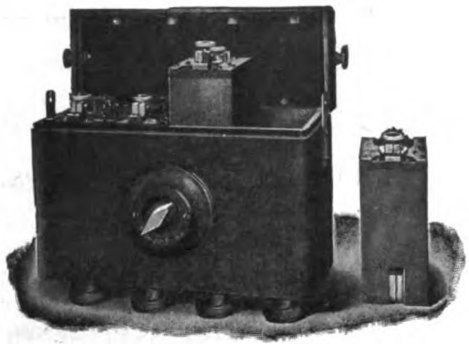
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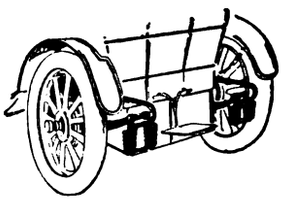
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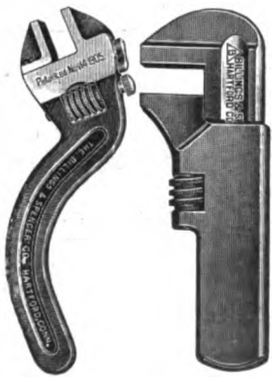
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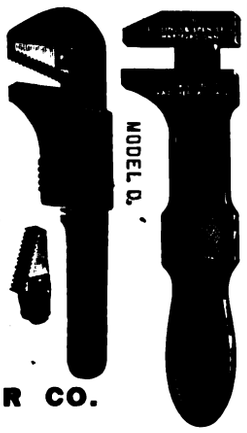
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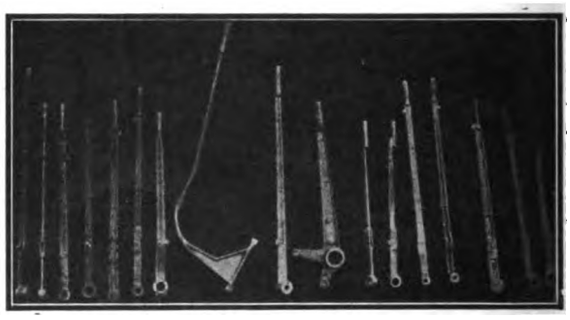


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PALMER-SINGER

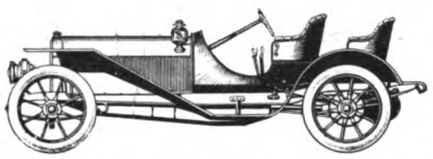
Palmer-Singer Town and Country Car 28-30 H. P. $3000

All Cars Are Licensed and Guaranteed

Sold by us Under Selden Patent for One Year.

Compare the Six-Sixty with any other 6 cylinder touring runabout of its horsepower—and you will find the other car $2,000 more in price. You will also find the other car worsted in every other point by the comparison.

Palmer-Singer Four-Forty Seven Passenger 40 H. P. Touring Car $4000



Palmer-Singer Six-Sixty Fast Touring Runabout 6 cyl., 60 H. P., $2850

Palmer-Singer Four-Thirty "Skimabout" 4 Cylinders 30 H. P. $1950

PALMER & SINGER MFG. CO.

1620-22-24 Broadway, N. Y. 1321 Michigan Ave., Chicago

Metropolitan Distributers of The **Selden.**

Sole Distributers of The **Simplex.**

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"We are satisfied no other tire will stand as rough usage as the Hartford"

Every mail brings to us words of praise of the endurance qualities of

HARTFORD TIRES



"The tire with the doubt and the risk left out"



¶ A very interesting letter has been recived by us from a Mexican customer praising our product which was fitted to the winning car in a race recently held there.

¶ The contest was for a silver cup offered by the Daily Record of Mexico City to the touring car which should make the quickest run from Mexico to Guernavaca and return, a distance of 135 kilo. over a stony and sandy road.

¶ Mr. Chas. L. Seeger, our customer, writes:

"At the last moment we decided to try for the cup with a 40 H. P. Locomobile, equipped with Hartford-Dunlop tires, Midgley Treads on the rear wheels. The tires had already seen considerable service, and having only one spare Dunlop tire in the size required, we carried it along in case of emergency, but it was not needed. We made the run in three hours and twenty minutes and won the cup without having to make any changes in the tire whatsoever. We are satisfied that there is no other tire made that will stand rougher usage better than the Hartford and say this unconditionally, as we believe, in no part of the world do tires receive rougher usage than in our country."

The Hartford Rnbber Works Co., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 55 Auburn Ave.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis, Minn.; Mercantile Lumber & Supply Co., Kansas City; St. Louis Tire Agency, St. Louis Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Salt Lake Hardware Co., Salt Lake City; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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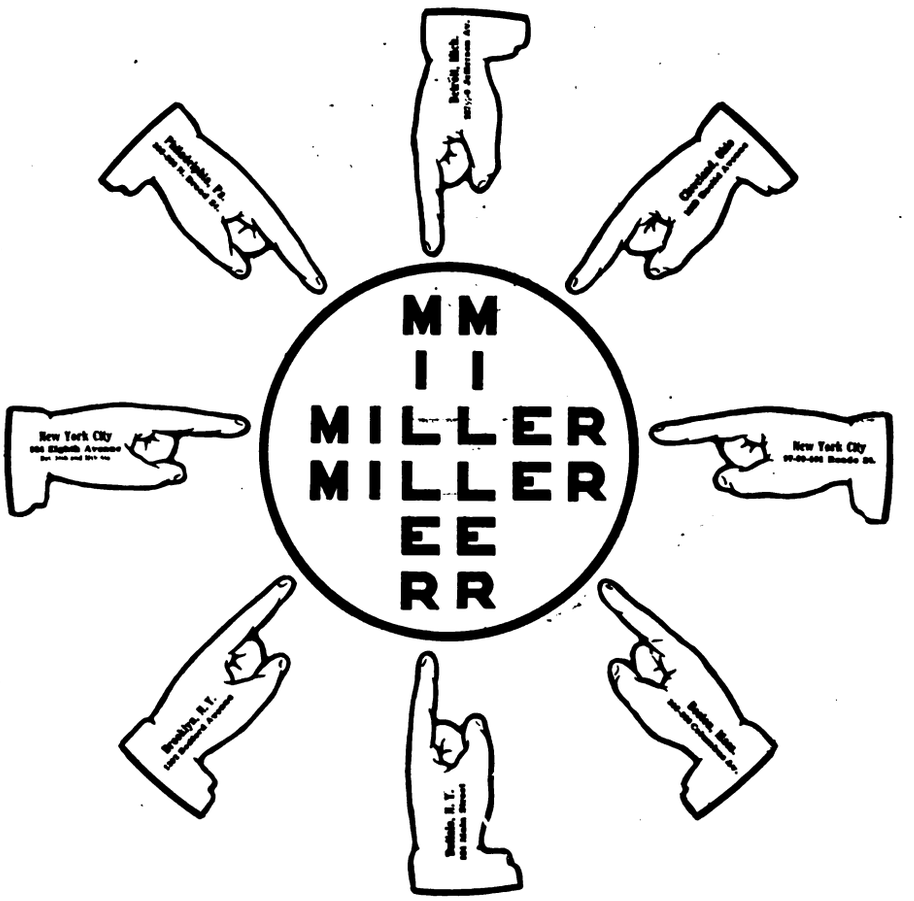
TRY MILLER

8 STORES

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit.



We Carry In Stock the Largest Assortment of

PARTS, FITTINGS AND SUNDRIES

To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

8 STORES

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE: 97-99-101 Reade Street, - - NEW YORK CITY

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The Marmon's ease of motion makes it the one car for the man of family. It enables a woman to tour any distance without exhaustion or injury.

The Marmon's distinctive ease of motion, ease of control, ease of steering, perfect lubrication, and many other vital advantages, are due to patented features, which deserve an inspection from every prospective automobile purchaser.

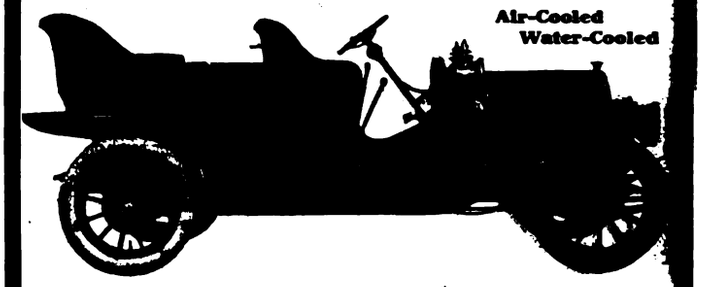
The man who knows and appreciates mechanical excellence will find more of it in The Marmon than in any other automobile.

45-50 H. P. Touring Car, . . . $3500
45-50 H. P. Roadster, . . . 3500
35-40 H. P. Touring Car, . . . 3000

THE MARMON

"A Mechanical Masterpiece"

Air-Cooled
Water-Cooled



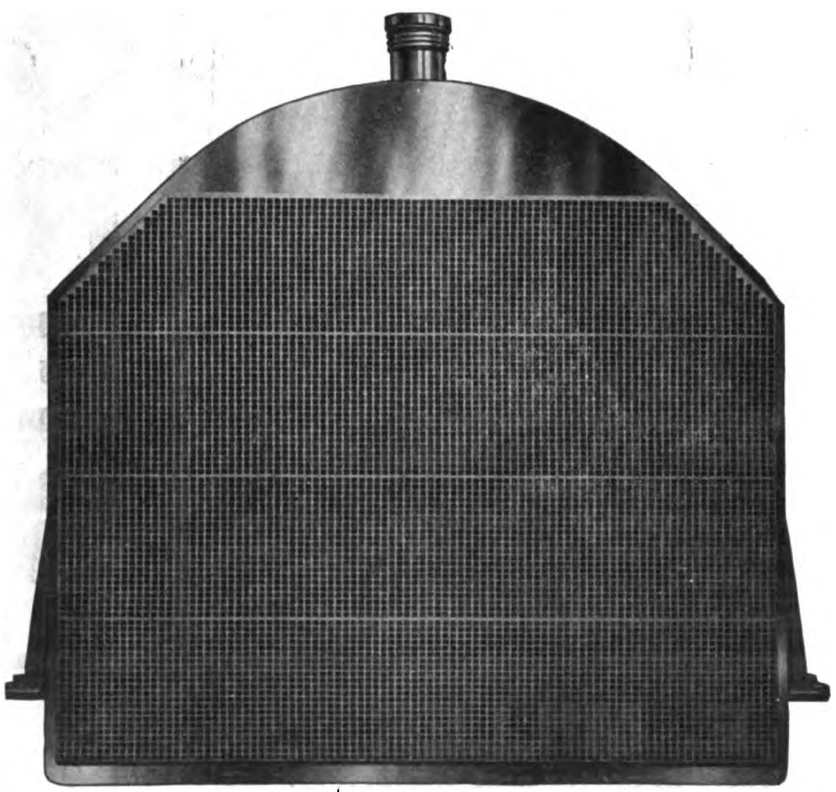
The Easiest Riding Car in the World

For catalog, address Dept. 16

Nordyke & Marmon Co., (Estab. 1851) Indianapolis, Ind.

Boston, Mass., F. E. Wing Motor Car Co., 12 Columbus Ave.
Philadelphia, Pa., Brazier Auto Works, 38th and Market Sts.
Baltimore Md., Snodeal Automobile Co., 2552 Madison Ave.
East Orange, N. J., Rickey Machine Co., 92 Eaton Place.
Milwaukee, Wis., John Ure, Jr., & Co., 172 12th St.
Indianapolis, Ind., H. T. Hearsey Vehicle Co.
St. Louis, Mo., Van Automobile Co., 4706 Washington Ave.
Pittsburg, Pa., Pennsylvania Auto Co., Hay St. and Kelly Ave., Wilkinsburg.
Waterloo, N. Y., Waterloo Automobile Co.,
Binghamton, N. Y., Heller-Spoon Motor Car Co.
Los Angeles, Cal., Big 4 Auto Co., 110 East 9th St.
W. S. Bruce Co., Memhhis, Tenn

Desirable Territory for Dealers. Note List Above



¶ It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

¶ "What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

¶ Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

¶ **The Mayo Radiator** is **The Quality Radiator.**

¶ If you are a **Quality Maker** better write us at once.

HONEYCOMB, CELLULAR OR FLAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.

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VICTORY FOR

Bosch Magneto

AT BRIARCLIFF

18 out of 22 cars entered in the Briarcliff Race were equipped with the Bosch Magneto. The entire American Crew—100%—used the Bosch Magneto.

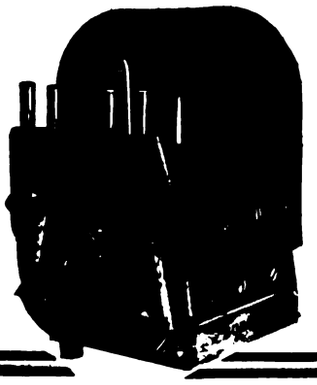
This is an unprecedented demonstration of the wonderful efficiency of this Ignition System. It means that 18 manufacturers and their drivers out of 22 considered it to be the only reliable system obtainable. It means that the Bosch Magneto should be on every automobile whether for city use, touring or racing.

The Bosch Magneto is to be found on the winning car of practically every important racing event the world over, and is part equipment of the Thomas, Zust and Protos Cars in the New York to Paris Race.

BOSCH MAGNETO COMPANY

160 West 56th Street

NEW YORK



THE INCOMPARABLE

WHITE

THE CAR FOR SERVICE



A TOURING CAR IN THE TRUE SENSE OF THE TERM

The man who gets the most pleasure from his touring car is not the man who limits his touring to the macadam roads; for the most interesting sections of the country and those of the greatest natural beauty lie, for the most part, beyond the regions of improved highways. For that reason, there is no quality of a motor car more important than the ability to traverse bad roads.

In unique degree, the White possesses the qualities of a "bad roads" car. Owing to the perfect flexibility of the engine, the White tourist can accommodate the speed of his car, yard by yard, to the condition of the road, speeding up on each little stretch of good road, and slowing down for each hole and "thank-ye-ma'am"—without shifting of gears or any manipulation except of the throttle. The tremendous pulling power of the White engine under all conditions means immunity from getting stuck in the mud or sand. Running through deep water, as in fording streams, is easy for a White. And as for climbing grades in mountainous regions—there is no other machine which can approach the White in hill-climbing qualities.

Drive a White Steamer and see the country

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. Boston, 320 Newbury St.
San Francisco, 1750 Market St. Chicago, 240 Michigan Ave.
Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave.
Pittsburg, 138-148 Beatty Street.

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$2500 $3000 $3750

HAYNES

Kokomo, Ind.

Here's a Record Breaker!

DURING the months of January, February, March and April, 1908, one dealer in the middle west sold Rambler automobiles to the value of $127,325.93.

There is a big opportunity for substantial business men to add greatly to the volume of their business by selling Rambler automobiles.

More business of all kinds is being done in the middle and southwest to-day than in any other section.

Right now Kansas City, perhaps the choicest location of all, is open for the sale of Rambler automobiles.

The Rambler sales agency proposition is reciprocal and is bound to interest any wideawake business man.

Write for particulars now.

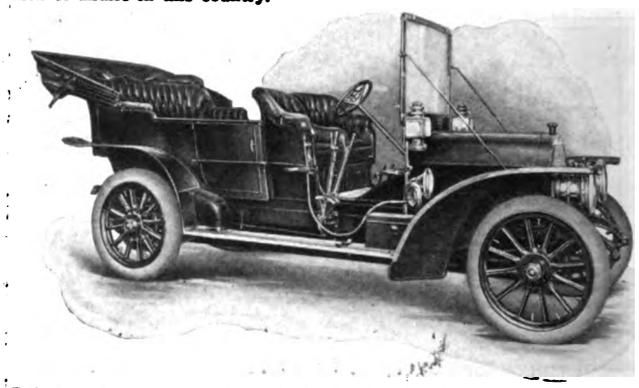
Thomas B. Jeffery & Company

Main Office and Factory: KENOSHA, WISCONSIN

Matheson

ONE YEAR GUARANTY

Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

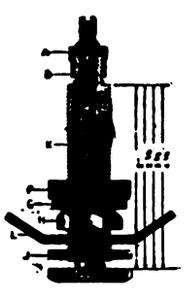
Licensed under Selden Patent.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE

Trade Mark Registered April 30, 1895

SIMPLE AND ABSOLUTELY AIR TIGHT



¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

¶ Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by **A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York**

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The "Maxwell"

Why Don't Dealers Make More Money?

It seems too bad, but it's a fact just the same—and you, Mr. Dealer, and I, might just as well be frank in discussing it—that the Dealer has had to carry the heaviest load and take most of the risks in this business during its period of development; and on the whole he has been a loser.

Few dealers have made money—you know that, and I know it. I deplore it—but facts are stubborn things.

There have been many reasons—incompetence on the dealer's part in many cases—an unsatisfactory product in more; and you have all had dealings with the maker who would not do his part—would not back up his cars when they failed to meet his glowing promises.

But underlying all these is a cause which, until it is eliminated, must always produce the same effect.

The automobile industry will never be on a firm footing until the maker can count, from year to year, decade to decade, on the same sales organization.

This cannot come to pass until some plan of operation—or rather co-operation—has been devised which will insure to the manufacturer the loyalty of every dealer in the field, and to the loyal dealer a share in the proceeds of the manufacturer's success.

Now I believe the sales organization is the key to success in this business. I believe it is the manufacturer's safeguard—the customer's mainstay.

I have given much thought to the solution of this problem. As a net result I have a remedy—to quote our friend from Boston.

No, I'm not going to divulge it here—it isn't for the world, for I'm a selfish man and I've worked this out for the express benefit of the Maxwell factory, Maxwell dealers and Maxwell owners—present and prospective.

That you may thoroughly understand it and be ready to co-operate with me when the right time comes, I am disclosing this plan gradually in our little weekly magazine, the "Co-operator." This journal tells a lot about Maxwell cars as well as my plan for building up a sales force which will eclipse anything of the kind now known either in this or any other manufacturing business. Every line in it will be interesting to you if you are one of those who mean to stay in the industry and profit by the experience of the past.

I want to enlist and then to retain in the Maxwell-Briscoe sales organization all the best, the most energetic, the most enterprising, and the men of highest integrity in the retail department of the automobile business.

I want to perfect a sales organization that will equal our present unrivaled manufacturing facilities.

I've formulated a plan that opens to each of you an opportunity for success that will be limited only by your own ability, energy and enthusiasm.

If you're interested—if you have suffered from the crude, unfair and ruinous methods of the past, write—I will send the "Co-operator" to you for the asking. Write me personally.

Benj. Briscoe

President

MAXWELL-BRISCOE MOTOR CO.

P. O. Box 106, Tarrytown, N. Y.

Members A. M. C. M. A. Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

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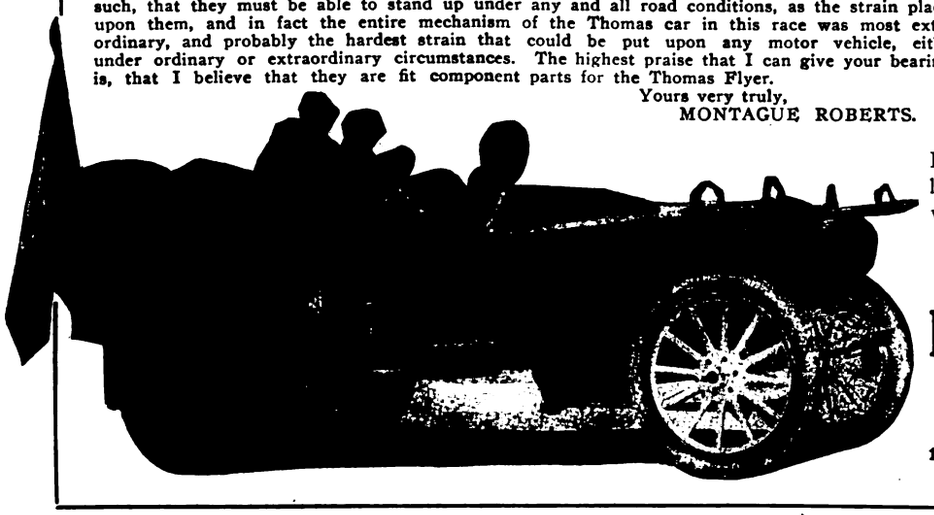
A TEST OF PRINCIPLE AND QUALITY

Probably one of the hardest tests an Automobile has ever been put to, has been met by the American entry, A THOMAS FLYER, in the New York to Paris Contest. The front wheels of this car are fitted with **Timken Roller Bearings,** the hardest service on a car for bearings—but up to the present time has given no trouble or needed any attention.

E. R. THOMAS MOTOR CO., Buffalo:

Gentlemen—It gives me great pleasure to inform you that the TIMKEN ROLLER BEARINGS which were used on the Thomas Flyer, which is America's entry in the International Race from New York to Paris, gave no trouble whatsoever from New York to Cheyenne, where I had charge of the car. I also believe that they have given no trouble since. These bearings, as you know, are placed where the greatest strain is on them, and it is a considerable pleasure to inform you that I believe the high quality of workmanship and material in your bearings is such, that they must be able to stand up under any and all road conditions, as the strain placed upon them, and in fact the entire mechanism of the Thomas car in this race was most extraordinary, and probably the hardest strain that could be put upon any motor vehicle, either under ordinary or extraordinary circumstances. The highest praise that I can give your bearings is, that I believe that they are fit component parts for the Thomas Flyer.

Yours very truly,
MONTAGUE ROBERTS.



TIMKEN ROLLER BEARINGS

are made to use on all roads, rough or smooth, and represent a special knowledge of load and tractive requirements, with a wearing quality impossible with any other form of frictionless bearings. And that is why over 60 per cent. of all the high grade American Automobiles and 95 per cent. of the Trucks made in this country recognize **The Timken Principle Correct and The Timken Quality Supreme.**

If you are building Automobiles or Trucks we would like to furnish you some data, based on facts that will not only interest you, but save you money.

The Timken Roller Bearing Axle Co.

CANTON, OHIO

BRANCHES

10 EAST 31st STREET NEW YORK

429 WABASH AVENUE CHICAGO

Down in Nashville

MORGAN & WRIGHT TIRES

give the same kind of servloe users are getting everywhere else.

Mr. Joe E. Yowell wrote us under date of April 8th:

"One of the best sets of tires I ever had were Morgan & Wright, and were on a Buick runabout. I used the car for eight months and at the time I sold it two of the tires still had Michigan air in them, and at last account, which was only a short time ago, one of them had never been punctured since leaving the factory July, 1906."

Nearly two years of service without even a puncture is probably due to good luck as well as to good tires, but the character of service received by other users of these tires leads us to believe that "good luck" must be particularly partial to the Morgan & Wright product.

We repeat what we have often stated before, that while we do not claim that every one of our tires will go thru an entire tour or an entire season without trouble, it would surprise most motorists to know what a large percentage of them will do it.

There is no method of making friends equal to the method of making good.

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere

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To experience in the fullest measure the real comfort of *AN EASY RIDING CAR* you should arrange with our nearest branch for a demonstration.

Studebaker

Automobile Co.

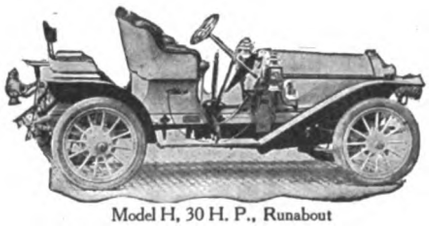
Main Factory, South Bend, Indiana, General Office, Cleveland, Ohio

BRANCHES

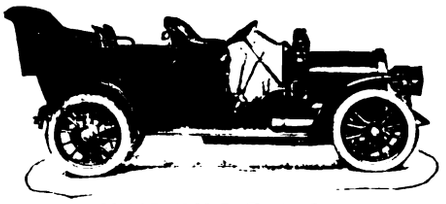
NEW YORK CITY—Studebaker Bros. Co. of New York, Broadway and 48th Sts.
CHICAGO, ILL.—Studebaker Bros. Mfg. Co., 378-388 Wabash Avenue.
PHILADELPHIA, PA.—Studebaker Bros. Co. of New York, 330 North Broad Street, (*Sub-Branch*)
BOSTON, MASS.—Studebaker Bros. Co. of New York, 1020 Boylston St. (*Sub-Branch*)
CLEVELAND, O.—Studebaker Automobile Co., 2064 Euclid Avenue.
DALLAS, TEXAS—Studebaker Bros. Mfg. Co., 317-319 Elm Street.
DENVER, COLO.—Studebaker Automobile Co., 1536 Broadway.
KANSAS CITY, MO.—Studebaker Bros. Mfg. Co., 13th and Hickory Streets.
PORTLAND, ORE.—Studebaker Bros. Co. Northwest, 330-336 E. Morrison St.
SALT LAKE CITY, UTAH—Studebaker Bros. Co. of Utah, 157 State Street.
SAN FRANCISCO, CAL.—Studebaker Bros. Co. of California, Mission and Fremont Sts.
SEATTLE, WASH.—Studebaker Bros. Co. Northwest, 308 First Avenue, South, (*Sub-Branch*)



Model A, 30 H. P., Limousine



Model H, 30 H. P., Runabout

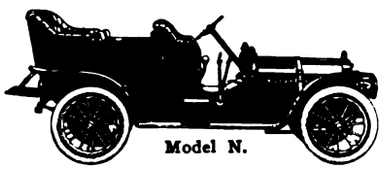


Model B, 40 H. P., Touring Car

National

Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with **Ball Bearings throughout, including the motor.**



Model N.

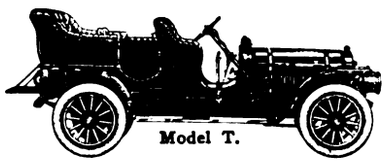
Model K—4 cyl., 4⅞ x 5
$3,500

Model N—4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x 4¾
$4,200

Model T—6 cyl., 5 x 5
$5,000



Model T.

Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.

The Auto-Meter Is Believed

Every big motor event that has taken place in the past three or four years has seen more Auto-Meters in evidence than all other makes of speed indicators combined.

In the Glidden Tours the number of Auto-Meters used by contestants doubled and tripled all other makes put together.

In the New York-Paris Race the only speed indicator is a Warner on the Thomas car.

Nearly all the automobile manufacturers of the country use the Warner to test out their cars before they leave the factory.

Two of the most successful makers are including the Warner as part of their regular equipment.

Aren't these facts rather significant—don't they mean anything to you?

Send for our new book, "The Final Truth About Speed Indicators."



Warner Instrument Co.

175 Wheeler Ave., Beloit, Wis.

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Rambler

Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any $4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., $1900

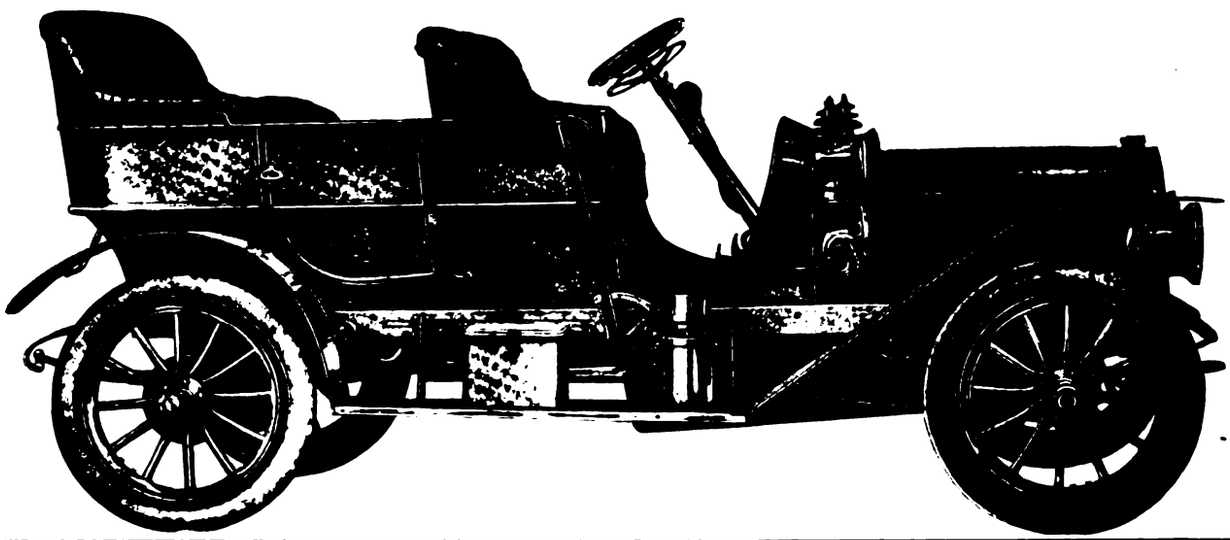
Write today for special circular aescribing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

BRANCHES AND DISTRIBUTING AGENTS

Chicago **Milwaukee** **Boston** **Philadelphia** **San Francisco**



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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, May 7, 1908. No. 6

KELLOM SUES THE SUBSTITUTORS

Philadelphia Oil Producer Follows up His Detective Work—Seeks $35,000 Damages from Eight Garages.

Charles F. Kellom & Co., the manufacturers of Invader oil, have made good their threat to bring to book the eight Philadelphia concerns from whom Kellom himself purchased oil which he alleges was fraudulently represented to be of the Invader brand.

Alleging fraud in the substitution of an inferior grade of oil, Kellom & Co. have filed eight separate suits asking for damages aggregating $35,000. The defendants named are the Mercury Machine Co., 2117 North Broad street; Belmont Auto Station, Belmont avenue and Viola street; Western Garage, 230 South Fortieth street; Springfield Garage, Forty-fifth street and Springfield avenue; North Philadelphia Auto Station, 3425 North Broad street; Rittenhouse Garage, 220 South Twenty-third street; Alexander Allan, Hyland avenue, below Belmont avenue; Suburban Garage, 29 West Harvey street.

Injunction proceedings are directed against the latter concern, and the court is asked to restrain it from selling substituted oil under the Kellom firm's trade name. It is alleged that a big tank, labeled with the name "Invader," is filled with imitation oil, sold as the genuine Kellom product.

Statements of claim in the damage suits are identical, and the names of persons who purchased spurious oils as the Kellom oil are given, backed by chemical analyses to prove the character of the lubricant.

At the time of his "round-up," the Motor World reported how Kellom, accompanied by witnesses, had visited thirteen Philadelphia garages, at eight of which he called for and was supplied with what was represented to be Invader oil, but which proved to be a spurious article. At one place, the Kellom party struck up such a "cordial acquaintance" with the salesman that he showed them the receptacle from which he laughingly stated that any brand of oil that might be called for was drawn.

Brandt to Conduct Cadillac Branch.

Ernest H. Brandt, former sales manager of the Corbin Motor Vehicle Corporation, has been appointed general eastern manager of the Cadillac Motor Car Co., an appointment that foreshadows the establishment of a direct Cadillac branch in New York City. It shortly will be located at about Fifty-ninth street and Broadway and it will be, of course, Brandt's headquarters. He will have dominion over New England, New York and New Jersey, and the cities of Philadelphia, Baltimore and Washington. In earlier years, Brandt was connected with the Hartford Rubber Works Co., with which E. R. Benson, who just has assumed the sales management of the Cadillac company, also was long identified.

Metzger Quits Cadillac; Benson Succeeds.

W. E. Metzger, so well and so widely known as sales manager of the Cadillac Motor Car Co., Detroit, resigned that office on the 30th ult, and has been succeeded by Ernest R. Benson, who in December last relinquished the secretaryship of the Hartford Rubber Works Co. to join the Cadillac company. Since that time a number of changes have been made in the sales system and these will be further amplified and perfected by Benson. Just what are Metzger's plans for the future have not been made known. He has several proposals under consideration and that he soon will be heard from, his ability and long experience and vigorous personality renders certain.

What Rubay's Schedule Discloses.

Schedules in bankruptcy of Leon Rubay, Inc., the New York accessory importer who failed some two months ago, show liabilities of $25,186. The assets, amounting to $19,562, consist of cash, $586, stock and fixtures, $5,945, and accounts $13,031.

FORD FILES AN AUDACIOUS ACTION

Makes Use of Ugly Rumor Affecting A. L. A. M. in Defending Infringement Suit —Basis of the Rumor.

Ever since it became generally known that pressure from within the Association of Licensed Automobile Manufacturers was seeking to bring about a reduction in the amount of royalty paid under the Selden patent, rumors have been afloat that the organization was in danger of disruption. The rumors have gathered embroidery as they traveled and although probability of disruption is so exceedingly remote as to be almost unthinkable, it did not prevent the attorneys for the Ford Motor Co. from putting the tale to work.

With that audacity which has marked their actions since the Electric Vehicle Co. brought suit against the Ford company for alleged infringement of the Selden patent, the attorneys on Tuesday last filed an application in the United States Circuit Court for the Southern District of New York, asking that the Electric Vehicle Co. be required to give security for costs in its suits for Selden patent infringement against the Ford company and others, failing which, they pray that the suits be dismissed. It is cited that the Electric Vehicle Co. is the sole owner of the Selden patent, that that company is in the hands of receivers and that the control of the litigation is under the authority of the A. L. A. M., which heretofore has been paying the expenses thereof and is under obligation to pay such expenses. The rumor affecting the future of the association and which alleges that it is in a "bad way" generally, is made use of in the concluding clause of the application, as follows:

"That said licensed association appears to be on the verge of dissolution and its individual members likely to be involved in costly litigation; that its revenues are very much impaired, and that as a source from

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which costs may be paid, it has become wholly unreliable."

While this manner of getting a disquieting rumor before the public has caused a conflict of opinion ranging from expressed admiration to unmeasured condemnation, it is safe to say that few persons accept the Ford application seriously or believe that the courts will give it more than compulsory attention.

As a matter of fact, the two members of the A. L. A. M. who led the fight for reduced royalty have within the last week voiced the most loyal sentiments, one of them giving it as his opinion that even without the Selden patent as a rallying standard, the disruption of the association would be in the nature of a calamity to the industry, so useful has it proved. The other, H. H. Franklin, has not only voiced practically similar opinions, but has given proof of his loyalty by cancelling his contract with an Ohio agent who violated the A. L. A. M. "exclusive agency" agreement by handling an unlicensed car. Also as a matter of fact, the membership agreement of the association is of a very binding nature as the Ford attorneys discovered when they took up or stood behind the Searchmont case in an endeavor to secure a share of the A. L. A. M. surplus.

Selden Royalty Case is Continued.

The hearing on the application of receivers of the Electric Vehicle Co. for permission to reduce the amount of royalty now exacted from holders of licenses under the Selden patent, has been continued until May 18th. Counsel for all of the interests concerned were present in the United States Court in Trenton, N. J., on Monday last, the date originally set for the hearing, and the argument presented was such that the court would not render an immediate decision.

The only objector to the granting of the petition was Frank A. Harrigan, of Philadelphia, who represented one of the creditors of the Electric Vehicle Co., arguing that these royalties had all been collected in the past, and gave statistics to show that in no year since 1903 had their aggregate fallen as low as the newly stipulated maximum. In 1903, they amounted to $153,783.55; in 1904, $253,273.42; in 1905, $413,958.31; in 1906, $564,535.24, and in the first nine months of 1907, $508,058.31. He pointed out that the granting of the petitions would, therefore, result in loss to the creditors of the Electric Vehicle Co., and asked that it be dismissed. In this he was opposed not only by the receivers' attorneys, but by the former United States Attorney-General John W. Griggs, who appeared in behalf of the Association of Licensed Automobile Manufacturers.

After a lengthy hearing of argument, Judge Lanning decided that the interests were of such magnitude that further consideration was necessary, and postponed further action until May 18.

The Week's Incorporations.

Kewaunee, Wis.—Marvel Motor Works, under Wisconsin laws, with $30,000 capital. Corporators—John Dishmaker and others.

Kansas City, Mo.—Fletcher-Cowherd Automobile Co., of Kansas City, The, under Missouri laws; capital increased from $10,000 to $16,000.

Seattle, Wash.—White Motor Car Co., under Washington laws, with $50,000 capital. Corporators—C. B. White, John Clifford, P. S. Donaldson.

Chicago, Ill.—Maxwell-Briscoe Co., under Illinois laws, with $30,000 capital, to sell automobiles. Corporators—Joseph M. Austin, Clarence E. Adams, S. C. Austin.

Ashland, Ky.—Ashland Automobile Co., Boyd County, under Kentucky laws, with $3,000 capital. Corporators—Henry J. Seibert, Charles W. Hutchinson, Bessie Hutchinson.

Omaha, Neb.—Pacific Coast Mobile Car Sign Co., under Nebraska laws, with $100,000 capital. Corporators—L. B. Kinne, Dr. N. J. Rice, Theodore Kharas, J. C. Baker, C. G. Saunders.

Chicago, Ill.—Hansen-Busch Automobile Co., under Illinois laws, with $5,000 capital; manufacturing and dealing in automobiles and operating machine shop. Corporators—John T. Gilbert, A. Hansen, H. Busch.

Glens Falls, N. Y.—Glens Falls Automobile Co., under New York laws, with $20,000 capital; to manufacture and sell automobiles. Corporators—W. Irving Griffing, Edward F. Irish, Winifred S. Harris, Glens Falls, N. Y.

Hartford, Conn.—Bush Mfg. Co., The, under Connecticut laws, with $2,500 capital; to manufacture, buy, sell and deal in automobiles and automobile parts. Corporators—Philip M. Bush, Edward J. Jetter, Bernard Garner.

Lynbrook, L. I.—Walton Motor Co., under New York laws, with $10,000 capital. Corporators—Julian N. Walton, Lynbrook, L. I.; Elbridge N. Smith, 412 Clermont avenue, Brooklyn, N. Y.; George F. Hickey, 69 Wall street, New York City, N. Y.

Grand Rapids, Mich.—Anthony-Hatcher Co., The, under Michigan laws, with $20,000 capital; to manufacture automobiles, trucks, and parts, general machinery and tools. Corporators—George E. Anthony, William A. Hatcher, George Clapperton, Charles M. Owen.

New York City, N. Y.—Haynes Automobile Co., under New York laws, with $5,000 capital. Corporators—Ernest W. Headington, 325 West Forty-fifth street, and Walter Broadhead, 3440 Broadway, New York City, N. Y.; James R. Finucane, 148 Washington avenue, Brooklyn, N. Y.

In the Retail World.

S. S. Pierce, a young business man from Boston, has succeeded the Western Automobile and Supply Co. at Colorado Springs, Colo.

Studebaker cars are to be handled in Colorado Springs, Colo., by Sanderson & Reinken, who have secured the agency. They will handle both gasolene and electric vehicles.

The Johnson Carriage Co. are this week opening a two-story fireproof garage in New Canaan, Conn. They will handle the Maxwell cars and do a general repair and garage business.

Bruce & Co., Memphis, Tenn., have obtained a permit to erect a garage at 340 Monroe avenue. The building, to cost $10,900, will be a one-story brick structure, 86 feet wide and extending back 144 feet.

Albert L. Perkins, dealing in automobiles at 1437 North Second street, St. Louis, Mo., has applied to the United States District Court to be adjudged a bankrupt. His liabilities are $29,725.73, and his assets $14,057.

Frederick Phillips, a civil engineer of Utica, N. Y., who is superintending a big engineering job in Florida, has gone into the automobile business "on the side." He has taken the Franklin agency and plans to erect a garage in Jacksonville.

The Bland-Mueller Auto Co., Milwaukee, Wis., has taken possession of the quarters formerly occupied by the Solliday Motor Car Co., at Fourth and Prairie streets. They will do renting, tire repairing and general garage work.

Fire at Golden Gate avenue and Larkin street, San Francisco, Cal., on the 25th ult., burned out the establishments of the Prest-O-Lite Co., the Neustadt Auto Supply Co., the C. F. Splitdorf Co., the San Francisco Auto Repair Co., and D. Zelinsky, automobile painter.

The Star Motor Co., 226 Halsey street, Newark, N. J., has been adjudged insolvent and Vice-Chancellor Emery has appointed W. Eugene Turton, a local lawyer, as receiver, fixing his bond at $5,000. The assets of the company were given as $3,300, and the liabilities as aggregating $14,000.

The property of the Brockton Motor Exchange, Brockton, Mass., has been bought by a new concern named the Gay Automobile Co., incorporated with a capitalization of $10,000. The company will continue the general automobile business at the same location, 351 Belmont avenue.

Aitken to Design the Mors Wagons.

The St. Louis Car Co., makers of the American Mors, are making ready to bring out commercial vehicles. W. J. Aitken, who has had experience as designing engineer with several automobile concerns, has been engaged to further the work.

Prest-O-Lite Sues Post & Lester.

A bill of complaint has been filed in the United States Circuit Court for the Connecticut district, by the Prest-O-Lite Co. of Indianapolis against the Post & Lester Co. of Hartford. The complainant alleges infringement of trade mark.

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MARCH EXPORTS SHRINK SLIGHTLY

Gains in Some Geographical Divisions Offset in Others—Shipments of Parts Show Marked Gains.

March proved to be a month of ups and downs in the export field. Yet despite gains on the part of 9 of the geographical divisions into which the foreign market is segregated by the Bureau of Statistics at Washington, the losses of the remaining 5 were sufficient to cause a net loss to the industry of some $6,000, as compared with the results of the March trading in 1907. But 217 cars were exported during the month, as against 307 one year ago. Their combined values were $466,447 and $493,425, respectively. The valuation of parts exported, however, revealed a gain of something over $21,000.

Of the countries showing improved conditions, West Indies and Bermuda led with $20,226, while Italy, France and "Other Countries" followed in the order named with $18,800, $15,300 and $13,000, respectively and in round numbers. Depreciating returns are credited to "Other Europe," which has fallen away nearly $55,000, Mexico, with about $27,500 loss, South America, British East Indies and Germany.

For the nine months ending March 31st a total gain of $182,618 is revealed. Eight countries shared in the upward trend, the United Kingdom leading with no less than a $373,780 appreciation. France, West Indies and Bermuda, Italy and "Other Countries" followed in this order and in amounts ranging from $116,260 in the first instance, to $24,860 in the last. Of the five countries showing losses as compared with the corresponding period of one year ago, Mexico lead with some $301,100, while "Other Europe," British North America and British Australasia followed with approximately $63,000, $46,000 and $43,000 losses. The losses of the British East Indies and Africa were small. The report in detail follows:

	March		Nine Months Ending March		
	1907	1908	1906	1907	1908
Automobiles and parts of	.....	.....	$2,064,874	.....	.....
*Automobiles	$493,425	$466,447	.....	$2,965,284	$3,159,147
Parts of	51,922	72,941	.....	453,309	442,064
Exported to—					
United Kingdom	146,621	156,820	541,431	809,644	1,183,425
France	65,813	81,083	139,226	277,418	393,678
Germany	13,701	10,347	45,742	85,508	91,245
Italy	27,024	45,842	171,628	126,127	153,076
Other Europe	59,573	4,688	102,459	166,260	103,141
British North America	124,524	135,948	353,717	695,884	649,641
Mexico	66,908	39,430	201,121	628,243	327,091
West Indies and Bermuda	13,391	33,617	220,424	171,800	230,294
South America	21,415	4,293	52,032	159,056	177,892
British East Indies	4,758	391	28,733	26,083	20,989
British Australasia	1,265	2,172	129,620	185,943	142,964
Other Asia and Oceania	236	11,151	40,767	69,712	87,506
Africa	118	525	26,094	8,673	7,161
Other countries	.....	13,081	11,880	8,242	33,108
Total automobiles and parts of.	$545,347	$539,388	$2,064,874	$3,418,593	$3,601,211

* Number not stated prior to July 1, 1906.

Dickinson's Verdict Proves Valueless.

Despite the jury verdict which gave him the full amount he sued for, $16,000, and $3,000 interest, Fred S. Dickinson appears to be as far as ever from securing the money from the Matheson Motor Car Co., Wilkes Barre, Pa. Dickinson claimed that he was instrumental in selling to the Matheson company the inventions of Charles R. Greuter for which he was promised certain returns, and after a long trial the jury sustained his claim. Judge Archbald, sitting in the United States Court at Scranton, Pa., has, however, overruled the verdict, and Dickinson probably will ask for a new trial.

During the hearing it was claimed by the plaintiff that the defendant company was estopped from denying its responsibility of the agreement entered into by the plaintiff and Greuter. Judge Archbald, in his opinion, fails to coincide with this view, and says, in part: "All that the plaintiff can claim to have contributed is his service, which was not rendered to the company, but solely for himself and Greuter. Greuter as sole owner of the invention was at perfect liberty to dispose of it to any company he desired and the company owed no duty to Dickinson except as a matter of courtesy. Judgment is rendered for the defendant non obstante veredicto."

Imports Continue to Diminish.

Despite the heavy receipt of taximeter cabs, which has served to give the importing trade an appearance of health, the statistics indicate that there has been no interruption in the shrinkage of the American demand for foreign cars. During April, but 71 automobiles, of the total appraised value of $181,496.75, were brought over, in comparison with 108 cars, valued at $348,835.09 in April, 1907, and 152 cars, valued at $508,083.57 in April, 1906. Three hundred and thirty-four cars, valued at $763,393.78, have been imported at this port since January 1, compared with 384 cars, valued at $1,261,296.59, and 452 cars, valued at $1,467,862.15, in the same period of 1907 and 1906, respectively.

BANKER ALLEGES A CONSPIRACY

Former Chicago Dealer Sues to Recover Damages for Lost Business—Tells How He was "Sold Out."

Having stepped into the limelight again after a long period of retirement from public view, Albert C. Banker, of Chicago, manifests a disposition to hold the stage. He jumped to the center a few weeks ago, as narrated in the Motor World at the time, through the action of a Chicago court resulting from his alleged threat to shoot Nicholas E. Ford, who had foreclosed a mortgage on his automobile business. It developed in the proceedings that his "shooting iron" was very much out of commission and could not be fired.

Now Banker is getting back at Ford; and others are involved. Banker, on Saturday, 2d inst., filed a suit in the Municipal Court, with a bill of particulars, wherein charges of conspiracy to defraud him of his automobile business are made against his former attorney, J. Marion Miller, together with George A. Durant, Banker's former superintendent; Nicholas E. Ford, who is a broker, and William H. Gardner. The suit is for damages in the amount of $15,000.

Banker formerly had an automobile establishment on Michigan avenue and in December, 1907, he says, Gardner's attorney, Miller, induced him to execute to Miller a promisory note for $1,000 and a mortgage on the plant. These obligations, according to Banker, were to secure to Miller the payment of future attorney's fees. Later, according to Banker, Durant was made custodian of the note and the mortgage, and Ford, representing that he was assignee, owner and holder of the note and the mortgage, seized the property and on April 6, Banker charges a "pretended sale was made without legal notice thereof, and the only bidders were George A. Durant and William H. Gardner."

Metzger Succeeds Gunderson in N. A. A. M.

At the monthly meeting of the National Association of Automobile Manufacturers in New York yesterday, W. E. Metzger resigned as the representative of the Cadillac Motor Car Co., and V. M. Gunderson as representative of the Northern Motor Car Co. Gunderson was immediately succeeded by Metzger, who long has had an interest in the Northern company, with which, it has been common report, he shortly will become prominently identified, a report that appears well founded in view of yesterday's proceedings. At the same meeting E. R. Chapin resigned as representative of the E. R. Thomas Buffalo company and H. E. Coffin as representative of the E. R. Thomas Detroit company, Chapin being at once elected to fill the vacancy caused by Coffin's retirement.

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Franklin

TRADE MARK REG. U. S PAT. OFFICE

Automobiles

A "six" needn't be expensive to own.

You can carry seven passengers in the Franklin 6-cylinder Type H automobile cheaper than you can carry five in the average 5-passenger machine.

Type H weighs only 2,600 pounds. And the air-cooled engine does the same work on 25 per cent. less gasoline than a water-cooled motor.

The average 7-passenger machine weighs a thousand pounds more than Type H. That means over 40 per cent more gasoline and tires to pay for. And not an ounce more touring ability.

You can't use the power of a heavy automobile on average roads. You can't "let it out" comfortably and safely.

What big, heavy water-cooled machine could run from San Francisco to New York in 15 days, as the Type H did two years ago; or from Chicago to New York in less than 40 hours as the Franklin D did last summer with the same size cylinders as Type H and the same shock-resisting Franklin construction? Many automobiles have tried it. None but the Franklin ever did it.

Type H doesn't pound on the roads like a heavy automobile. It is strong and easy to manage—less liable to accident. It lasts longer. That brings the owning cost down.

The Franklin has no water-cooling system; nothing to boil nor leak nor freeze nor fuss over.

Type H solves the problem of high-power, light-weight, and a well-balanced motor. It is the present limit of 6-cylinder engineering. No other high-powered automobile rides so easy or is so smooth and flexible. No other carries its load so far in a day on American roads. Think of a big 6-cylinder 7-passenger automobile that costs less to own and run than the average 5-passenger 4-cylinder machine.

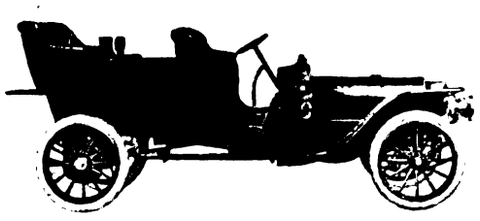
Weight makes owning-cost. See your automobile weighed.

16 h. p. Runabout	$1,750	28 h. p. Touring car or Runabout	$2,850
16 h. p. Touring car	1,850	42 h. p. 6-cylinder Touring car or runabout.	4,000

Prices F. O. B. Syracuse.

Write for the catalogue describing Franklin models.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.



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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MAY 7, 1908

Positions of the Pedals.

Motorists of long standing often find it difficult to appreciate the mental attitude of the novice, and even to comprehend how it is possible for confusion to result from an attempt to control successfully so simple a mechanism as the motor car. Even when not at all well acquainted with the details of the power plant, it is still hard to realize that the control mechanism presents untold perplexities to the beginner. This lack of sympathy between those who possess and those who are without experience in handling machines, tends to act as a check upon simplification in certain details, merely because the makers find it hard to appreciate the need of refinements which are, to their own way of thinking, uncalled for.

It has come to be pretty generally recognized, for example, that the accelerator pedal is a useful accessory to the controlling system. In modern cars, it is most commonly use in conjunction with a hand lever mounted on the steering wheel, and furnishes a convenient method of suddenly increasing or reducing the speed of the engine, when changing gears, or when cramped in traffic. It would be extremely difficult to convince the average maker of a car so equipped, however, that there is the remotest possibility that the accelerator pedal and the brake pedal which lies adjacent to it might become confused in an emergency, and with disastrous results. With the driver of experience such a mistake is practically impossible because the use of the respective pedals, as well as their exact location on the foot board is so firmly impressed on the mind that the effort of applying them is wholly sub-conscious. As the uses of the two are distinctly opposite in purpose, the chance of their becoming confused is still further removed.

Nevertheless, the fact remains that beginners are frequently known to perform most extraordinary evolutions through this circumstance, and that numerous accidents are avoided only because a kindly Fate which always watches over the toddler intervenes to prevent. On this account such arrangements of the control as permit the accelerator to be placed at some distance from the brake pedal, or require a different movement for operating the one from that which is required for the other, may be considered advantageous. Where pedals of the "push" type are used for the clutch and brake, and of the piano type for the accelerator, the advantage is considerable, as is also the case where the accelerator pedal or button is located at the extreme end of the board.

What would serve the purpose to better advantage, perhaps, would be some automatic interlocking arrangement, whereby the functions of brake and accelerator pedal could be combined, with opposite motions required to effect the two different purposes. Somewhat the same idea is carried out where the clutch pedal is interconnected with the throttle. This arrangement has its disadvantages, however, since with anything like a close adjustment, it is impossible to speed the motor before engaging the transmission. With the brake, no such difficulty exists. The possible objection on the score of the occasional requirement of starting from rest without fully releasing the brake is now eliminated by the fairly general adoption of the ratchet sprag, or "hill-paw[illegible]" "Fool-proofing" the car, is an odious catch phrase which has itself a foolish sound in the ears of the accomplished motorist. But, when it is considered that not every driver can be expected to be an expert or a mechanic, the wisdom of the practice is perfectly apparent.

Repairers, Expert and Otherwise.

He is a wise automobilist who knows his own repairman. Probably there is no riskier experiment, or one more replete with possibilities for annoyance, than to seek the counsel and assistance of a mechanic or half mechanic, whose only guarantee of ability to repair the power plant of an automobile is found in his own statement, printed on his business cards or heralded by his companions, that he is a "Gas Engine Expert."

Dr. Johnson says: "Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information upon it," and the latter is as important as the former. To accept the statement of a self-styled expert that he is entirely competent to remedy the difficulties which have presented themselves, without evidence that his experiences in the past warrant the assertion, is merely an instance of "buying a pig in a poke" and as most of the employes in garages and repair shops proclaim their right to the title "expert," it is more than an even chance that the customer will suffer as often as he will benefit by the experiment.

One of the common practices of the present day is for owners to engage the services of shop employes and garage attendants to do work evenings and Sundays, when they are not engaged in their regular occupations. Of course the object is to get "cheap" repairs by cutting out the garage owner's profit. But this plan does not always work well, as it does not follow that the employes who can temper springs or turn up a set of piston rings, is competent to find the trouble in a motor and remedy it. There is no reason why a machinist should be expected to understand the timing of a motor or the adjustment of some of its minor parts, and actually he does not understand it, unless he has had the opportunity to do these things often, thus learning by actual experience, which, positively, is the only way that he can learn.

Because a man is familiar with the uses of machinery and can run a lathe or drill

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press he is not necessarily competent to advise in matters relating to automobiles. An owner will do far better to pay the cost of having his car repaired in a proper place and in the regular way then he will by engaging the "off" time of some irresponsible machinist who may be able to "bluff" through a job of repair or adjustment, which he actually does not understand.

It seems as though every time Tom, Dick and Harry who works in a garage or repair shop, whether as body washer or clerk, soon styles himself as some sort of a mysterious wizard who can diagnose the symptoms in gasolene engine troubles and make complete repairs with one hand tied behind him and both eyes shut. But let this type of individual get at your engine and you'll bring joy to the reputable repairman to whom eventually you will be forced to go.

If there is any one thing more than half a dozen others that owners want to flee from, as they would from the plague, its the "gas engine expert" or any other self styled "expert" who, in point of fact, too often does not know as much about the automobile as does the man who paid for it and has had, at least, a little experience in its care and operation.

Mr. Hower and His Run.

Chairman Hower's press bureau is making a manful effort to prove itself worthy of its hire. It has delivered a "crusher," which is to say, that it has answered the Motor World's query: What will happen to the Glidden contest if anything happens to Hower? The press bureau answers the question easily—poof! just like that! "The tour will go right on." And of course it will. But not "according to Hower." That is impossible, and there is no other way that it rightfully can go on if the rules mean what they say.

The rules state unequivocally that no one but Mr. Hower shall have anything whatsoever to say or do with the contest at any time. The press bureau maintains that if that gentleman should be disabled by a stomach ache or anything else, his secretary will fall heir to his duties and to his previously unheard of power—the power to reject anyone or anything, or to change or repeal any rule, or to make new ones, or to alter any score and keep on doing it "up to and including the final award."

The press bureau is inclined to scold any one who disagrees with its telepathic interpretation of the English language. It thinks it is "real mean" that any one should resort to "quibbles" or "technicalities." But when a small army of tradespeople are engaged in a bitter scramble for a sky-scraping advertisment—which is the real definition of the Glidden contest—technicalities are likely to play a very important part; and he is a wise promoter who recognizes the truth far in advance.

According to the rules as they have been laid down, no contestant in the Glidden business need, or indeed should pay the slightest attention to anything that may be said by assistant chairmen, or first, second or third assistant secretaries, or even press agents. They can laugh at each and all of them. There is but one person to whom they should and must give heed—the chairman, Mr. Frank B. Hower, an estimable gentleman with unusual ideas of sport. There is no room for quibble on this point. The rules are specific. They provide for one official and one only—the chairman; no one else has any authority of any kind and no provision is made for a shifting of any part of his power or for a substitute or successor in the event of his disablement. His secretary may have a "rainy day schedule" and other things concealed in his brain, but what of it? If Mr. Hower is not there to drag them from concealment and make a new rule or change an old one on the spot the secretary certainly has no power to do so, and the competitor who heeded him merely would be "taking chances."

The fact of the matter is that Mr. Hower either is consumed by his own egotism or has been badly advised. The manufacturer who pays $200 for the privilege of seeking an advertisement in such a "blind run," the rules for which mean nothing, and which absolutely is subject to the irritations and caprices of one man, must want advertisement pretty badly. Mr. Hower undoubtedly is a gentleman and an honorable one, but for all of that, he is but human. Rules and laws are made to be inflexible for a purpose. No judge can be fair to all who is a law unto himself, and who may have one rule to-day and another one to-morrow. That is the sort of judgment on which the Glidden contest places a premium, paid press agents to the contrary notwithstanding.

When a manufacturer has acquired a proud reputation for his product no effort or expense is too great to protect it. For that reason, the oil manufacturer who has brought to book men who palmed off on unsuspecting purchasers a spurious lubricant, merits whole hearted commendation; his example is worthy of emulation. The just-as-good argument is bad enough, but it is not in the same class with barefaced substitution.

COMING EVENTS

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 23, Albany, N. Y.—Albany Automobile Club's annual hill climbing contest up Menand's hill.

May 30, Salem, N. J.—Salem Horse Show and Athletic Association's track meet.

Map 30, Denver, Colo.—300-miles road race for stock chassis.

May 30, Boston, Mass. Bay State Automobile Association's race meet at Readville track.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

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SMALL TROUBLES SPOILED SCORES

Only Two Perfect in Harrisburg's Sealed Bonnet Run—Ditching of One Car the Only Disaster.

Every one agrees that it was a great sealed bonnet endurance run—was the two days' contest promoted by the Automobile Club of Harrisburg, Pa., the route of which was from that city to Philadelphia and return, Monday and Tuesday, May 5th and 6th. Unlike a majority of runs of the sort there were not a dozen or more perfect scores at the finish. True, of the 26 cars that left Harrisburg on Monday, there were six that got back to the Pennsylvania capital Tuesday night with apparently perfect scores, but when the technical committee got through its task of examining the mechanism of the perfect six, four were dropped from the list. Whereat there was considerable sorrow. There were just two cars that withstood every test, and were adjudged perfect scorers in every sense of the word. They were Walter C. White's White, winner of Class A, for touring cars costing $2,250 and over, and C. C. Cumbler's Pullman, winner of Class D, for runabouts costing less than $2,000. However, the winner in Class B, for touring cars costing less than $2,250, was two winks within a perfect score. It was W. W. Cram's Mitchell, and after finishing with perfect scores as regards time schedule and without any mechanical trouble, the committee in the final examination discovered a small water leak and a nut lock on the exhaust manifold missing. That cost just two points. In like manner was Stuart Lafean's Pullman penalized in Class C, for runabouts costing $2,000 and over. It finished with a perfect score, but in the final examination the committee found it six points off technically, not enough, however, to lose first place in the class. The Rambler and the Pennsylvania also were perfect in this class until the technical committee got in its work. Then the Rambler lost 17 points and the Pennsylvania was assessed 11 points, both penalizations being for loosened parts, it was stated. The only other car that suffered in this manner in the final reckoning was the Thomas in Class A, driven by C. C. Fairman. It was assessed 15 points.

Why many of the cars did not finish with perfect scores may be told in a few words.



HODSON (STODDARD-DAYTON) DITCHED NEAR EASTON

R. H. Hagerling, Cadillac, had tire trouble, which lost 203 points, and jammed his gears, which cost him a further loss of 439 points. Chester Smith, Jackson, broke a tire bead and lost 15 points, while E. G. Irvin's Pullman suffered with a broken water connection. Robert Morton's Pullman had engine trouble the first day and Graupner, a running mate of Irvin and Morton, lost points through the same cause.

Conklin's Pullman had both tire and engine trouble. Robert Shirk, Stoddard-Dayton ,lost 150 points through carburetter trouble, while the other Stoddard-Dayton, driven by Howard Hodson, was put out at Easton with a broken wheel, being forced into a ditch by another car. F. F. Mears, Atlas, had continuous tire trouble, and A. D. Miller, Elmore, was disqualified after the first day's run. Engine trouble is said to have been responsible for the downfall of C. J. Swain, Apperson, while Arthur Kumpf, who finished last year's Glidden tour with a perfect score, broke the differentials in his car. A. A. Jones, Ford, damaged a coil unit which lost for him many points from both time and mechanical standpoints.

There were 26 cars that left Harrisburg early Monday morning for the 174.5 miles run to Philadelphia, via Lebanon, Reading, Allentown, Easton and Doylestown. The time limit to Lebanon, 26.4 miles, was 1 hour 20 minutes, and to Reading, 29.8 miles, 1 hour 30 minutes. One hour 50 minutes was allowed for the 37 miles run to Allentown and 1 hour 10 minutes to Easton, 23 miles. From Easton to Doylestown is 32.4 miles and the schedule was 1 hour 35 minutes, ten minutes less than this being allowed for the final leg of the first day's run into Philadelphia, 26.1 miles.

The roads over which the route was laid were in far better condition than had been expected after the rains of the week before. The worst trouble was dust, although considerable tire trouble was experienced on account of sharp loose stones. The water breaks in the vicinity of Reiglesville and Doylestown also caused several minor mechanical troubles. The only accident of the day was caused indirectly through tire trouble. Howard Hodson, Stoddard-Dayton, was forced into a ditch between Kutztown and Allentown when trying to pass C. C. Fairman's Thomas car. The latter had been delayed by tire trouble and a signal had



CROWD OF SPECTATORS AT READING—A TYPICAL GATHERING

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been given to Hodson to pass. As he was about to do so, the Thomas veered with the above result. With the aid of passengers in Charles Fleming's Maxwell the car was pulled out of the water and was making fine time on the way to Dolyestown, when the right front wheel, which had been weakened by the dive into the ditch, gave way and dropped the axle down on the ground. No one was thrown out or injured in any way.

It was a dirty-faced crowd that reached Philadelphia and drove to the White garage where the cars were locked under official surveillance during the night. Despite their dirty faces, eleven of the drivers were happy for it was supposed they had perfect scores for that half of the journey. The clean score drivers were: J. S. Tregon, Jackson; E. G. Irvin, Pullman; J. A. Kline, Pullman; Stuart Lafean, Pullman; H. W. Rawll, Pierce Arrow; W. M. Cram, Mitchell; S. Thorley, Cadillac; A. A. Jones, Ford; A. H. Bitner, Rambler; Len Zengle, Pennsylvania, and last, but not least by any means, Walter C. White, White.

The return trip from Philadelphia to Harrisburg, on Tuesday, via Norristown, Reading, Lancaster and Mount Joy, a distance of 142.7 miles, resulted in a tumble from the perfect score brigade by several others. The run back to Harrisburg was marked by one casualty. It was the unfortunate knocking down and injuring of James L. Douglass, a prominent citizen of Reading, by Chester A. Smith, in a Jackson car. The accident was not the fault of the driver, as has been stated, but was caused by the inadequacy of the police regulations, according to an eyewitness of the unfortunate affair. When the cars began to arrive at the control in Reading there was but one policeman to handle a crowd of 250 persons. Smith already had stopped his car near the control and when the time came for him to check in he started ahead and the crowd parted, leaving the old man standing alone with his back to the approaching car. He did not get out of the way in time and the car hit him and knocked him down. At this point the officious policeman jumped on the running board of the Jackson car, grabbed Smith by the neck and in spite of the fact that the car was still moving, attempted to drag him from the seat. Accompanied by a cry of "lynch him" from the mob, Smith was yanked from the seat and dragged off to the police station, still held by the back of the neck and surrounded by a hooting crowd. The totally uncalled for rough manner in which the policeman handled Smith gave the impression that the brave (?) Reading officer had captured a desperado, which is probably what he wanted the crowd to think.

This left the remaining crowd at the control to wander around with no police in sight. R. H. Hagerling, Cadillac, drove up just as the old man, Douglass, was knocked down, and Hagerling was arrested, too, although he was not concerned in the accident. Although Smith ran only 25 yards, he was charged with running 20 miles an hour, and Hagerling's name was entered in the blotter with the same offense. Each driver was fined $25, which was paid by W. I. Dill, who entered the Cadillac car. After the fines were paid both drivers were re-arrested—Smith on a charge of violating the speed regulations of the county and with aggravated assault and battery, and Hagerling for having violated the speed regulations. Bail was given as the magistrate would not listen to the argument that the drivers could not be arrested twice for the same offense, after the fine had been paid once. It is doubtful if Douglass will recover. His left arm was broken near the shoulder, and his left hip was injured.. It is feared that he may have suffered internal injuries, and as he is 81 years old, it is feared that his age may count against his recovery. At last reports he was but slightly improved.

Walter White's driving excited admiration. He was always the last to start and always the last to check in on time at the controls, and in consequence his party was the only one not covered with dust. White always had just time enough at the controls to get out and look over the car. His victory was a double one, as he was one of the four drivers that tied for the trophy last year. The others who were in the tie were A. G. Irvin, Pullman; S. K. Hamburger, Thomas, and H. F. Rawll, Pierce Arrow. As Hamburger could not get the same car he had last year he did not compete in the runoff. Why the other did not get perfect scores has been told. White thereby gains permanent possession of the 1907 trophy.

Subjoined is the complete score as given out by the contest committee. The first two colmns of figures give the penalties for the lateness at controls each day; the second two columns show the points scored for work on motors, breaking of seals, or stopping of motors involuntarily. The fifth column gives the penalties imposed by the technical committee in its final investigation after the finish at Harrisburg. Loose bolts, nuts, broken parts and other disarrangements were penalized.

CLASS A.—TOURING CARS COSTING $2,250 AND OVER.

	Time. 1st Day.	Time. 2d Day.	Mech'l. 1st Day.	Mech'l. 2d Day.	Exam.	Total.
Walter C. White, White	0	0	0	0	0	0
C. C. Fairman, Thomas	0	0	0	0	15	15
Robert Morton, Pullman	6	0	55	4	0	65
J. A. Kline, Pullman	0	11	0	50	60	121
Robert Shirk, Stoddard-Dayton	0	39	0	150	0	189

CLASS B.—TOURING CARS COSTING LESS THAN $2,250.

W. M. Cram, Mitchell	0	0	0	0	2	2
Charles Fleming, Maxwell	0	0	0	2	4	6
Andrew Bender, Maxwell	2	2	0	2	19	25
Max Graupner, Pullman	0	0	11	19	21	51
C. C. Crispen, Cadillac	0	0	0	4	76	80

CLASS C.—RUNABOUTS COSTING $2,000 AND OVER.

Stuart Lafean, Pullman	0	0	0	0	6	6
R. H. Croninger, Pennsylvania	0	0	0	0	11	11
A. H. Bitner, Rambler	0	0	0	0	17	17
C. J. Swain, Apperson	0	0	0	13	5	18
E. G. Irvin, Pullman	0	0	0	9	56	65

CLASS D.—RUNABOUTS COSTING LESS THAN $2,000.

C. C. Cumbler, Pullman	0	0	0	0	0	0
F. K. Mears, Atlas	9	132	0	0	15	156
John Sellers, Maxwell	80	0	66	0	66	212
A. A. Jones, Ford	0	107	0	243	96	446
C. C. Conklin, Pullman	88	2	325	35	29	479

Virginia State Association Joins A. A. A.

The Virginia State Automobile Association was elected to membership in the American Automobile Association at the meeting of the latter organization, held in New York City, Tuesday afternoon, 5th inst. The acquisition of this association makes the total State memberships of the national body number twenty-four. The Automobile Club of Little Rock, Ark., was elected as a club. Frank Joyce, president of the Minnesota State Automobile Association, recommended that the association adopt an emblem for members to use on the radiators of their cars. It is likely that his suggestion will receive further consideration. It was stated that several attractive touring propositions were submitted, but the nature of them was not divulged. The nomination of Powell Evans, president of the Automobile Club of Philadelphia, as a member of the executive committee of the Good Roads Board was confirmed.

No More New York Legislation This Year.

Despite printed statements that during the special session of the New York legislature, which will convene on the 11th inst. action will be taken on the new automobile bill that was abandoned by Senator Armstrong, in the last house of the regular session, there is no truth in the reports. Chairman Terry, of the legislative committee of the American Automobile Association states that as the special session was called solely to consider the race track bills, automobile legislation is out of the question.

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THIRTEEN WAS THE LUCKY NUMBER

That Many Perfect Scores Made in Detroit's Three Days' Run—All Sorts of Roads Encountered.

With 32 starters, all but two of which finished, and 13 of that number with perfect scores, the three days endurance run conducted by the Detroit Automobile Dealers' Association on April 29, 30 and May 1, over 435 miles of variable roads was a success—such a success that it cannot be compared with the endurance run held last year. The outcome of the three days' run was so favorable that the dealers talk of holding a non-stop endurance run over somewhat the same course later in the season.

Because thirteen of the competing drivers finished without a mark against them the association decided to not split hairs in an effort to award the cup, but instead will engrave the names of the thirteen on the trophy and hold it for future competition. The perfect scorers were Davis (Franklin), Grant (Thomas), E. J. Chapman (Northern), Kelsey (Maxwell), Mochesky (Thomas), H. K. Sheridan (White), House (Northern), Day (Pierce-Arrow), Aubel (Oldsmobile), Lane (Stoddard-Dayton), Lorimer (Thomas), F. E. Crum (Oldsmobile), and Bemb (Peerless).

Starting at 6.30 a. m. Wednesday, 29th ult., 32 cars left the Hotel Tuller in Detroit, at intervals of two minutes, for the first day's run to Saginaw, 140 miles. All kinds of roads were encountered, those between Saginaw and Bay City being so bad that several of the cars lost points. In many places the mud was more than hub deep and it is a wonder that more scores did not sink when the cars did. One of the Brush runabouts came to grief near Lapeer, just before reaching the noon control at Flint. The conditions of the run were not exacting. The cars were all competing as one class, the only requirements being that the runabouts had to carry at least two persons and the touring cars at least three persons. The time allowance was made on a basis of 15 miles an hour, and lateness at controls, beyond a ten minutes leeway meant a deduction of one point per minute, while repairs, adjustments and replacements were charged at the rate of one point per minute.

Lobdel's Brush runabout was the only car that did not check in at Saginaw at the finish of the day's run, but several drivers had points marked against their original 1,000 points. While ploughing through the deep mud just outside of Saginaw, Houston's Pope-Hartford hit a stump, which caused the starting crank to bend. It took 14 minutes to straighten it and these were the only points he lost on the run. White's Cadillac and Scott's Ford each lost one point, and Neumann's Welch lost 11 points on the first leg of the course. Machesky's Thomas finished on time despite the fact that it stopped some minutes to fish the Brush runabout out of a creek into which it had skidded.

When the second day's run ended at Kalamazoo on Thursday night, 152 miles having been covered from Saginaw, 16 of the original number of starters still had perfect scores. The worst roads were encountered between Saginaw and Lansing, where the noon control was located, but from the State capital to Kalamazoo was comparatively easy going. The drivers who fell from the clean sheet brigade in the second day's journey were: Garland (Cadillic), Mandell (Brush), McCalmont (Jackson), who quit. Schofield (Stevens-Duryea), Young (Stevens-Duryea), Bleasdale (Maxwell), Gilmore (Mitchell), Cunningham (Ford), Schiefler (Jackson), and McMullen (Cadillac.

Although several cars suffered a further reduction in scores on the last leg, from Kalamazoo to Detroit, 143 miles, only three of the perfect scores were reduced. These were Lemmer's Cadillac with 8 points; E. H. Chapin's Northern, with 1 point, and Seidler's Jackson, disqualified. Chapin's loss of one point came about in an unusual manner. He adjusted a spark coil unit, which required just 30 seconds to lose one point.

In the final adjustment of penalties Miloch's Cadillac was boosted from 453 points to 725 points, it being found that but one-half hour was taken in changing the spindle instead of five hours as was marked on the observer's card. Schuffield's Stevens-Duryea also was charged with one additional point for taking off a fender, and Harry Cunningham (Ford) lost 30 points for making repairs caused when the car went through a broken bridge through no fault of the driver. This revised summary follows:

Davis, Franklin	1,000
Lane, Stoddard-Dayton	1,000
Day, Pierce-Arrow	1,000
Sheridan, White	1,000
Grant, Thomas	1,000
Bemb, Peerless	1,000
E. J. Chapin, Northern	1,000
Kelsey, Maxwell	1,000
Michesky, Thomas	1,000
House, Northern	1,000
Aubel, Oldsmobile	1,000
F. E. Crum, Oldsmobile	1,000
White, Cadillac	999
E. H. Chapin, Northern	999
Schuffield, Stevens-Duryea	996
McMullen, Cadillac	995
Lemmer, Cadillac	992
Neumann, Welch	989
Scott, Ford	989
Houston, Pope-Hartford	986
Young, Stevens-Duryea	981
Cunningham, Ford	947
Garland, Cadillac	939
Mendall, Brush	813
Miloch, Cadillac	725
Bleasdale, Maxwell	688
Schiefler, Jackson	618
Gilmour, Michell	464
McCalmount, Jackson	Out
Lobdell, Brush	Out
Siedler, Jackson	Disqualified

TROOPS WILL GUARD THE COURSE

Big Preparations for Bridgeport's Annual Climbfest at Sport Hill—Nine Events on the Card.

Probably no event to be held on Decoration Day, May 30th, will attract more attention than the hill climbing contest on Sport Hill, near Bridgeport, Conn. The hill climb is an annual fixture of the automobile Club of Bridgeport, and last year Joseph Tracey was the stellar attraction, making the best time in the gasolene class.

More attention has been given to details for this year's climb than to any that have preceded it. The announcement was made this week that arrangements have been effected to have the course thoroughly patrolled by militia. The soldiers will be under the command of Captain George E. Hawes of the Fourteenth Company, Coast Artillery Corps, C. N. G. The soldiers will be in full uniform and carry the regulation rifle. As they will be sworn in as special constables they will have more power than appears on the surface. This will be a feature in automobile contests, as it will be the first hill climbing contest in America where State troops have been used to guard the course. Besides the soldiers there will be a force of Easton deputies and constables who will act as signalmen.

The first event will be started at 8 o'clock in order to have the meet concluded by noon, as the soldiers will have to participate in the Decoration Day parade which is to be held in Bridgeport in the afternoon. The course will be thoroughly oiled before the contest, and the mile incline officially surveyed. The course will be open to competitors for practice between the hours of 5 and 8 a. m. during the week before Decoration Day.

The committee made known its program this week. It consists of nine events, as follows: Class 1, gasolene cars, $850 and under; class 2, gasolene cars, $851 to $1,250; class 3, gasolene cars, $1,251 to $2,000; class 4, gasolene touring cars, $2,001 to $3,000; class 5, gasolene runabouts, $2,001 to $3,000; class 6, gasolene cars, $3,001 to $4,000; class 7, gasolene cars, $4.001 and over; class 8, free-for-all; class 9, Crauford cup for amateur drivers of gasolene cars.

The Crauford cup is offered by Robert B. Crauford, who won the Yale cup last year, and, as stated, is for amateurs.

Planning 300 Miles Race for Denver.

Although the course has not yet beet made public, it is expected that a 300-miles road race for stock chassis will be held in the vicinity of Denver, Colo., on Decoration Day, May 30th. G. A. Blanchard, for several years identified with automobile interests in Colorado, is promoting the contest.

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OHIO LAW NEARS COMPLETION

Will Establish State Regulation and Prohibit Local Enactments—Flat Rate Fees and Speed Limitations.

If the Ohio State Senate concurs in the amendments which the House has made to the automobile measure known as the Ward bill, the Buckeye State soon will have what is to be known officially as the "automobile law." One of these amendments gives a person run down by a motor vehicle the right to bring suit in the county wherein the accident occurred instead of in the county where the owner of the machine lives; another compels the owner of the car or the chauffeur to stop and give his name and address if requested by any person injured by the car; a third requires the display on the car of only two lighted lamps at night, whereas the original bill required the carrying of a red light in the rear as well.

The bill as it stands establishes a system of State licenses for machines and chauffeurs. It relieves motorists from danger of arrest for violation of local ordinances, which it repeals, and it forbids municipalities, townships and counties making speed regulations or other restrictions.

Owners and lessees of motor cars are to pay annual licenses of $5 to the Secretary of State, manufacturers and dealers, $10 for each make or style of machine, with $2 each for duplicate certificates of the single numeral assigned to each style of motor, and chauffeurs $2.

The Secretary of State is to furnish the county clerk with the list of registered machines and chauffeurs belonging in the county and also a sort of blacklist of the owners and chauffeurs who have been convicted of violating the law. This will enable the local courts to ascertain whether they are first or second offenders.

Every motor vehicle must carry its number in front and behind, and from half an hour after sunset to half an hour before sunrise two lighted lamps. Each chauffeur must wear an oval aluminum badge, and both he or any other person may be fined for carrying off a machine without the permission of the owner. Chauffeurs are subject to fine and imprisonment, as are owners of machines, and in addition a chauffeur may be suspended from the right to do business for 30 days on the second offense, and a year on the third offense.

The speed limits are eight miles in the business portions of municipalities, 15 mles in other parts of town, and 20 miles on country roads. The operator of a motor car must stop on signal when meeting or overtaking a horse-drawn vehicle or person or horseback, but need not stop longer than necessary for the safe passage of the two vehicles. Both carriages and automobiles on meeting either carriages or automobiles must give half of the road, and persons on horseback or bicycles must give two-thirds of the road to carriages or automobiles.

Revenues for licenses shall be turned into the State good roads fund. Residents of other States which have automobile laws substantially like the Ohio law need not comply with the Ohio law, provided they comply with their own law while motoring in Ohio.

What the Legislature Did About Roads.

In the closing hours of its session the New York State legislature appropriated $3.000,000 to be used for the development of good roads. State Engineer Skene had asked for $7,000,000 for this purpose and on finding that only $3,000,000 had been appropriated for this year, only $1,000,000 of which is immediately available, and $2,000,000 in October, has written to the governor that the appropriation and the conditions under which it is given make it absolutely of no use for its intended purposes. In his letter to the governor the State engineer calls his attention to the law which requires that all appropriations for road building must be divided among 46 counties and the $1,000,000 now available for the purpose would build only from one to three miles in each county.

Among the laws enacted by the legislature was one providing for the creation of a department of highways which will be created on the 10th of January, 1909, by the incoming governor, who will appoint three commissioners, one each for a period of two, four and six years respectively, thereafter all terms to be for six years. It will be their duty to work out the intelligent development of the highways of the State of New York, and they are particularly charged and given power to create a department which shall have nothing to do but maintain roads when once they are built.

Tax Assessor Discouraged by Cheap Cars.

County Assessor Shriver, of Douglass county, Nebraska, is disgusted. In fact, he has almost made up his mind to close out and move into some other county. For years the assessor has prided himself on living in a county where nothing but the best is used, but something has happened to change his mind. Shriver has just finished assessing automobiles, and although there are 392 cars in Douglass county, not one of them is valued at more than $500 by the owners, the valuations ranging from $150 to $500. The assessor had thought that several $6,000 cars were owned in Omaha, at any rate, but now concludes he must have been mistaken, and that Douglass county is "cheap" when it comes to automobiles.

Race Meet for Salem's Mile Track.

It was announced this week that the Salem Horse Show and Athletic Association will hold a race meet in Salem, N. J., on May 30th. There is a mile track there which will be employed.

INDIANAPOLIS "SQUEEZE" UPHELD

City Ordinance Imposing Local Tax on Automobiles Declared Valid—Dealers Give up the Fight.

Judge Allen, sitting in the Circuit Court of Indiana, has sustained the validity of the Indianapolis ordinance which provides for a local annual tax of $3 on all automobiles used within the city limits.

To bring the matter to a decision, one of the automobile dealers was fined in Police Court for failure to pay the city license fee of $3, and he appealed his case. On the appeal, the dealer filed a demurrer to the city's complaint, raising two points—the question of whether the ordinance conflicts with the State law, and whether the wording of the ordinance, which says horseless carriage," covers motor trucks.

Judge Allen, of the Circuit Court, overruled this demurrer, holding that the ordinance does not conflict with the State law, inasmuch as the former is a revenue measure, solely, to raise funds for street pavement maintenance, while the State law is a police regulation. This was the point made by the city in the case, so that its contention seems to be clearly upheld by the court's ruling.

City Controller Greunig said that, since Judge Allen had upheld the city's contention in regard to the ordinance, all automobile owners would be compelled to pay the $3 fee required. The dealers have decided to accept Judge Allen's decision.

Must Not Sell Gasolene on Sunday.

Automobile owners in East Orange, N. J., and more than 200 cars are owned in that city, are up in arms over the action of the Common Council in passing a Sunday closing ordinance which will prevent them from purchasing gasolene on that day, should their supply become exhausted. Few of them have facilities for keeping gasolene on their premises, and it has been a general custom to obtain supplies at the nearest garage when starting out for the Sunday jaunt. The garagemen are equally distressed by the new regulation, which means a loss in sales of gasolene.

Automobile Caravan for Denver Delegates.

Automobiles have become identified with the development of political campaigns, but evidence is not lacking that this fall will see even more striking advances in this line than have been witnessed hitherto. One of the incidents of the forthcoming Democratic convention in Denver, next July, will be the arrival of a number of the Illinois delegates in an automobile caravan. Four seven-passenger touring cars and a luggage wagon will be employed for the purpose. A week will be occupied in making the trip from Chicago to Denver.

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SHOWS WHAT'S AROUND THE TURN

Device to Prevent Accidents on Intersecting Roads—Simple Application of a Well Known Principle.

So many accidents have resulted from carelessness in approaching "blind" corners on the highway where the condition of traffic on intersecting roads was hidden because of the character of the surroundings, that it is coming to be recognized as important that steps be taken to safeguard such localities especially where they lie upon roads much frequented by motorists. Abroad, where speeding along the open road is openly indulged in, the danger is much greater than in this country where drivers who are exceeding the speed limit are apt to be more or less careful in approaching such spots owing to the illegality of their driving. Several methods of correcting the evil have been proposed, one of the most striking being that of erecting suitable mirrors at the intersecting corners in such a way that drivers of vehicles coming in either direction are visible to those traveling along an interferring course.

Although recently propounded in England, it is claimed that the idea originated in France, where a well-known motorist took out patents on the system which is here described several years ago. The principle upon which the system is based is readily apparent from Fig. 1, where the position and arrangement of the mirror, D, is very evidently such that the driver of a car in the position A, on the road X-Y, could discern the driver of a second car at B, even though the direct line of sight A-B might be obscured by buildings or some natural obstruction.

The type of reflector necessary to accomplish the desired purpose would be planoconcave in form, and for purposes of economy is made up of a series of rectangular panes mounted in a curved frame as shown in Fig. 2. A series of vertical sashes or T-irons, b, are placed in the framework, to form guides into which the afit plates, a', are slid, seating below in the bottom plate, c, and being covered above by the closing piece, d, while for purposes of protection a screen, e, is also placed in front of the plates. The general appearance of the mirror and its standard is shown in Fig. 3, which also indicates that the arrangement need not of necessity be in any way a disfigurement to the landscape.

The curve of the framework, to which the glass plates conform as closely as possible, is laid out with respect to the angle of the intersection and is arranged to reflect a distinct image of each of the approaches to the turn in the direction of the other. A point which should be mentioned in this connection is that the advantages of the arrangement at night would be even greater than in the daytime, since the headlight beam from approaching cars would be thrown directly in the drivers' eyes, rendering the danger signal very effective. In daylight, of course, the system would be of no avail unless one or the other of the drivers were to look directly at the mirror.

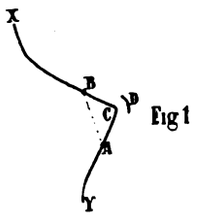


Fig 1

At night, the sudden flash of light would serve as an unmistakable warning.

Of other proposed means of protecting highway intersections, the most readily suggested and at the same time, the most difficult of achievement relate to the clearing of the ground in the immediate vicinity of the corner for a space sufficient to enable drivers to watch the intersection for some

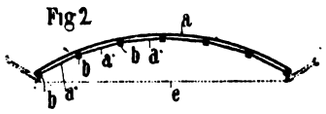
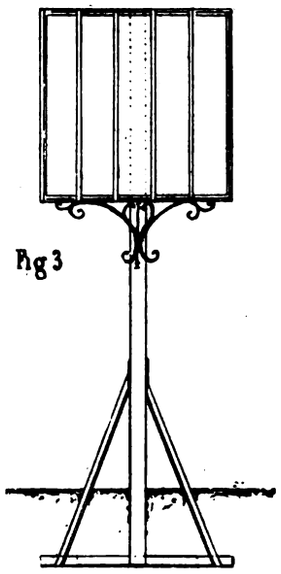


Fig 2

little distance on either side of the turn To effect this, legal provisions would have to be made in most cases, while frequently the enforcement of even a perfectly satisfactory law would be accompanied by many difficulties and endless expense. Hence, as a simple and comparatively inexpensive method of protection the system in question would appear to be the most practical solu-


Fig 3

tion of the difficulty. A further adaptation of the idea might include a comprehensive and accurate sign board system with road-markers to be mounted over each mirror, in which case, the attention of drivers would be more likely to be attracted to the latter than if they stood by themselves.

COMPLETE ELECTRIC PLANT ON CAR

New Ignition System Which Produces Its Own Current—Automatic Lighting and Original Indicator Devices.

While electricity performs an indispensible part in the operation of automobiles, its chief servce has been in connection with the explosion of the charge in the cylinder. As the development of motor cars progressed, electricity came into common use for the illumination of limousine bodies, and occasionally for side and head lights, and in the operation of various accessories, but it has remained for the Witherbee Igniter Co., New York, to show the manifold use which could be made of electricity in connection with automobiles, and recently this company equipped a car for M. R. Hutchison with the most complete electrical installation ever put in an automobile.

This electrical equipment consists of two Witherbee No. 86 batteries connected in series, located under the rear seat of the machine. The batteries are charged by dynamo situated under the front floor boards. A wood split pulley, attached to the shaft between the clutch and the gear box, together with the belt, drives the dynamo and air compressor, which inflates the tires and operates the pneumatic jacks for raising the machine. In addition to the dynamo there is a Wico charging device located on the running board, which enables the driver to charge the storage battery from any electric light socket.

The headlights are equipped with stereopticon incandescent lights, which can be turned off or on at will. The side and rear lights are fitted with small incandescents.

By each of the side doors of the tonneau there is a lamp turned on automatically when either door is opened, lighting the way into the tonneau where another lamp operates simultaneously by the same means, illuminating the interior.

By raising the bonnet of the engine four lamps on either side of the motor are automatically turned on. There is also a lamp in the pan under the engine, and also lamps beneath the chassis which are turned on from the switch board.

On the dash board are five lamps, illuminating the speedometer, ammeter, volt meter, pressure gauge, oil feed drips and clock.

Attached to each wheel rim is a device which indicates when the air pressure in the tires is below 60 pounds, by sounding one of the electric horns attached to the dash. An indicator on the dash locates the trouble instantly. The same horn blows, and the same indicator operates when any bearings are hot, the water in the radiator gets low, the oil in the oil box gets half empty or when the gasolene gets down to five gallons.

Putting on either of the foot brakes or

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the emergency blows an electric horn attached to the rear of the car, and drops a sign "Stop." As soon as the brake is released, the horn blows and the sign disappears.

There are four lights in the folding top which may be turned on when they are needed.

On each end of the rear seat, and on the back of the front seat there is an electric cigar lighter. Situated near each of the wheels are extension lamps, for use about or under the chassis.

In the rear of the car is a box with a celluloid front, through which the license number for whatever state the car is in is visible. These numbers are painted on a curtain, and can be turned at will.

The signaling equipment consists of three Klaxon horns, and when all three are going, they can be heard for a mile distant. If the occupant of the tonneau wishes to speak to the driver, a special telephone transmitter is used, and the electric horn on the dash proceeds to talk in a loud clear tone. If the driver wishes to say a few things to a teamster, it is not necessary to waste strength shouting. He simply speaks into his transmitter and the electric horn on the mud guard repeats his words loud enough to be heard at a distance of several blocks, thus making intended warnings fully intelligible.

Automobile Transportation for Live Sheep.

In connection with the development of Punta Arenas, the southernmost, and only free port of Chile, considerable stress is being laid on the possibilities of developing the business of exporting mutton to foreign markets, a line of steamers having been arranged for to transport the dressed carcasses to the London wharves. A feature of the scheme, which is a most comprehensive one, is the use of motor traction for getting the sheep to the shipping point. Four 40 horsepower traction engines, of German construction have lately been put into service between Punta Arenas and the up-country ranches, some of which are 100 miles inland. Each of the machines is capable of drawing a train of three or four loaded wagons across the plains at a rate of four to six mile sper hour.

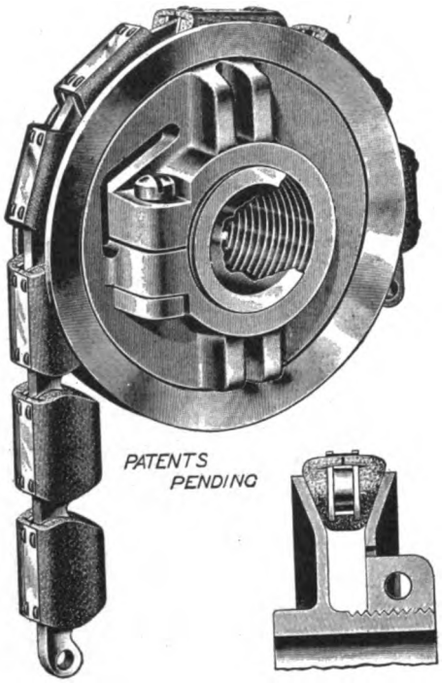
Prince Henry Invents an Accessory.

Even royalty has taken a hand in inventing automobile accessories. Prince Henry of Prussia has applied for a patent on a device to keep mud and moisture from obstructing the view through glass wind shields. The apparatus is very simple, consisting of two arms equipped with rubber edges. The arms are fastened on pivots on either side of the wind shield. A handle is located within convenient reach of the driver, and by turning this handle the rubber edges are moved over the glass, much in the manner that window washers employ when using a somewhat similar device on large store windows.

NEW SYSTEM FOR FAN DRIVING

How the Whitney Chain Belt Meets a Trying "Little" Problem—Its Characteristics and Adaptability.

What has come to be regarded as a most trying "little" problem in connection with automobile design is the construction and maintenance of the transmission to the radiator fan. A wide variety of driving principles have been adopted for the purpose at one time or another, yet owing to the peculiar conditions encountered, more or less trouble has been experienced with nearly all



of them. On this account no little interest centers about an entirely new system, which possesses the desirable features of uniform and powerful traction, a tension adjustment without idlers and independent of the center-to-center distance of the pulleys, and which while being absolutely free from "bending resistance," also is inelastic in the direction of its length and non-stretchable. These advantages are embodied in the new chain belt, which has just been developed by the Whitney Mfg. Co., Hartford, Conn.

As its name implies, this is merely a block chain shod with leather contacts of V-section, which envelop each pair of side plates and adapt them to run over a grooved pulley of approved form. The result is a transmission embodying all the advantages of the V-belt, without its stretching propensities, and also minus its resistance to bending. It may be run over pulleys of large or small diameter with equal facility, requires no idler for taking up the slack, and is adaptable to sheaves which are separated by a fixed distance. Whatever tension adjustment is required by the wear of the leather shoes, is made by altering the distance between the flanges of one of the pulleys, thus causing the belt to travel a greater or less distance from the center.

The details of belt and pulley construction are shown by the accompanying illustration. The leathers, which are of special shape, are bent over their respective links, and secured by locking plates, which are embedded in their surfaces, and fastened by projections of the side plates, which are headed over. Prongs on the under side of the locking plates also engage the leather, making the fastening still more secure. In this way, an all-leather to metal friction contact is secured, while the rigidity and flexibility of the chain in the radial sense is unimpaired.

In the construction of the adjustable pulley one flange is formed on a collor threaded over the main hub or boss. It is split and fitted with a locking screw so that it may be fixed in any desired position, its adjustment determining the line of contact between the belt and flanges.

Besides being useful for purposes of fan driving, the chain belt also is adaptable to a wide variety of purposes in driving the different auxiliaries on the motor car. It also is adaptable to multiple uses in connection with power plants.

Encouraging Intelligent Care of the Car.

A novel method of encouraging chauffeurs to take care of their cars, with special reference to the subject of lubrication, has been adopted by a foreign manufacturer. Dating from May 1st owners of this particular make of automobiles were requested to permit a representative of the manufacturer to pay unexpected visits to their garages. The inspector will make an examination of the automobiles and will observe the condition of the cars making special note in regard to lubrication. At the end of the year the ten drivers, whose cars have received the best reports, will be awarded $125 each.

Separate Receptable for the Carbide.

When cars are equipped with acetylene generators it is far better that the carbide should be carried in a separate receptacle rather than in the generator when the latter is not being used. As carbide is keenly susceptible to atmospheric conditions, it is absolutely essential that it should be kept perfectly dry until the gas which it generates is wanted for illuminating purposes. In the generator in which water is contained, the proximity of the water to the carbide usually effects the latter, and when gas is required it frequently is found that the generating power has been exhausted.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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WHAT IS GOING ON IN CLUBDOM

Preparing to Fight Jersey's New Law—San Antonio to Have Race Meet—Elections of Officers.

There was no opposition to the election of Paul E. Heller as president of the New Jersey Automobile and Motor Club of Newark, at the annual meeting on Monday night, and aside from the passage of a resolution authorizing the board of trustees of the club to contribute a certain sum to a fund that is being raised to test the constitutionality of the New Jersey automobile law and contributing $150 to a local hospital, the meeting was a quiet one. The retiring trustees presented H. A. Bonnell, the retiring secretary, with a superb silver service as a token of appreciation for his valuable services. The new officers of the New Jersey club are: Paul E. Heller, Newark, president; W. Olive Crosby, East Orange, vice-president; Dr. James R. English, Newark, treasurer, and A. B. Le Massena, Hoboken, secretary. The five trustees, who were re-elected for a term of two years, were William C. Shanly, Dr. Frank B. Meeker, Frederick A. Croselmire and A. G. Scherer, Newark, and H. A. Bonnell, East Orange. The two hold-over trustees are Joseph H. Wood and W. F. Kimber.

An elaborate race meet, to equal the Vanderbilt and other classic road races, was talked of at the annual meeting of the San Antonio (Texas) Automobile Club, and a committee was empowered to sound the business men of the Texan city as to the feasibility of the project. At the meeting officers were elected as follows: President, Dr. W. B. Russ; vice-president, H. E. Ogg; secretary, Dr. George M. Fairfield; directors, R. W. Carr, E. R. Richardson, Dr. W. B. Russ, Dr. E. J. Fieldin, Dr. George M. Fairfield, H. E. Ogg and C. C. Cresson.

At an enthusiastic meeting, attended by more than 100 owners, the Columbus (O.) Automobile Club was formed last week. The work of organization was due chiefly to the efforts of the Ohio State Automobile Association, of which the new club will become a member. Officers were elected as follows: President, Max Morehouse; first vice-president, P. B. Monypenny; second vice-president, Dr. George P. Stephenson; secretary, Herman A. Hoseter; assistant secretary, A. Miller; treasurer, E. M. Schoenborn.

At its annual meeting the Iowa Automobile Club of Des Moines decided to hold an endurance contest, but the selection of a date was left until a future meeting. Officers were elected as follows: President, John Gibson; first vice-president, L. Aulman; second vice-president, W. W. Sears; secretary, Cheney Prouty; executive committee, E. T. Meredith, Vere Reynolds and Harold Wells.

The following officers were elected at the annual meeting of the Mankato (Minn.) Automobile Club: President, John H. Hohmann; vice-president, F. K. Meagher; secretary, Frank Brett; treasurer, B. Bangerter, Jr.; trustees, George M. Palmer, C. Saulpaugh, and G. A. Lewis. The club shortly will publish "a book of rules for the running of automobiles," which will be distributed to the members.

Forty automobilists of Kankakee, Ill., have organized the Kankakee Motor Club with the following officers: President, H. A. Magruder; vice-president, Louis Beckman; secretary-treasurer, Dr. C. K. Smith; directors, Alden Brown, George Fortin, Henry Volkman and F. D. Martin. The last named was made chairman of the membership committee.

Mason City, Iowa, now has an automobile club, the Midland Automobile club having been formed with the following officers: President, A. J. Zingre; vice-president, J. F. Emery; secretary-treasurer, W. H. Hathorn.

The Grand Rapids (Mich.) Automobile Club has elected these officers for the ensuing club year. President, Dr. Emmett Welsh; vice-president, J. R. Jackson; secretary, Dr. William Burlson.

Memorial Day Race Meet at Readville.

Prospects for an interesting race meet at the Readville track at Boston on Memorial Day, May 30th, appear in a preliminary announcement by the race committee of the Bay State Automobile Association that it will promote a meet on that date. The events as arranged are seven in number, five for automobiles and two for motorcycles, as follows:

Five miles open to stuck gasolene touring cars of from 24.1 to 40 horsepower. Five miles open to stock touring cars from 40.1 to 60 horsepower. Five miles open to all gasolene runabouts, irrespective of horsepower. Twenty miles open to stripped stock chasses. Five miles handicap. Five miles open to single cylinder motorcycles. Five miles free-for-all, motorcycles, open to all classes.

Women to Make Transcontinental Tour.

And now the transcontinentalette! On Thursday next, 14th inst., two women—Mrs. E. E. Teape and her daughter, Mrs. Vera McKelvie, of Sands Point, Idaho—are due to start from Portland, Maine, to make a 4,000 mile trip across the continent to Portland, Ore. Their route will be via Boston, Springfield, Albany, Syracuse, Buffalo, Cleveland, Chicago, DesMoines, Cheyenne, Salt Lake City, Ogden, Boise City and Baker City, to Portland. The undertaking is worthy of remark in that so far as is known it is the first trip over this route, and also because these two women will be the first to attempt such a long journey unaided by men. They will drive a two-cylinder runabout and will take things leisurely.

NEW NAME FOR THE CARBURETTER

Amusing Proof that "a Little Knowledge is a Dangerous Thing"—Ludicrous Blunder in Technical Terms.

It long has been said that " a little knowledge is a dangerous thing." To this statement might be added something to the effect that the possessor of a "little knowledge" is apt to make himself ludicrous, as the following incident serves to show.

To a city official had been assigned a municipally owned automobile and a municipally employed chauffeur. The machine was of ancient vintage, but the driver was as fresh as a new laid egg. The combination was one that probably would be the means of causing the official much weeping, wailing and gnashing of his store teeth, for he was an elderly man who was "sot" in his ways and not favorably disposed toward motor cars or vehicles masquerading as such.

One of the chief characteristics of the official was his willingness to talk with anybody on any subject under the sun. It mattered not whether the topic was religion, politics, mechanics, or anything else, he would enter the discussion with a vim and an assurance of manner that usually impressed his hearers with a belief in his knowledge of the subject. Naturally his friends, even those who knew he had never before ridden in an automobile, were not surprised to hear him hold forth on spark plugs, cylinders, pistons, water system, pumps, etc., after two or three days of riding in his recently acquired machine.

The machine had been in use a week or two, when one day the chauffeur, wanting the afternoon for himself, caught his heel in the ground wire, and disconnected it. At the time of the "accident," the boss was en route to keep an appointment with the head of the department and the stopping of the machine in the outlying district, far from trolley cars was a decided inconvenience. He telephoned at once for his horse and carriage, and finally drove away.

While waiting for his carriage, he had watched the chauffeur, who apparently was looking for the trouble, and while looking, the latter was imparting much information. When the official reached his office he called up his superior to explain his failure in keeping the appointment.

"What was the matter, Mr. Blank? It is anything that will lay up the machine for a while?" asked the executive, over the 'phone.

"No, I think not,"responded Mr. Blank? I didn't make a complete examination, but from the way the engine acted I think there must have been some water in the fumicator." And Mr. Blank, for a long time, wondered what caused the road of laughter that greeted his diagnosis.

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SIXTEEN CONTESTANTS WON CUPS

Triumphed Over Rough Roads and Frequent Fords in Baltimore Sealed Bonnet Contest—Sixteen Failed.

When it first thought of promoting a sealed bonnet endurance contest for automobiles the Baltimore newspaper that did conduct one on Saturday last, 2d inst., evidently did not take into consideration the reliability of present day motor cars. Quite frankly, it did not expect any of the 32 cars that started in the 147.8 miles run from the Monumental City to Hagerstown and return to finish with absolutely clean sheets; or, if any, then not so many as did. For be it known that of the 32 starters exactly one-half of that number completed the journey over hills and roads that are not by any means boulevards without a single count against them. In view of this the promoters, instead of the three cups for the highest scores, will give each perfect scorer a cup for himself.

The test was a success as well as a revelation. It was the first that had ever been conducted in Maryland, but it will not be the last of the sort, as President Reese, of the Automobile Club of Maryland, has announced that the organization will conduct a similar contest next fall.

The test reminded one of the drivers of the sandwiches he used to get at a charitable institution which he was investigating in the pursuit of his socialogical studies. The roads were like those sandwiches—"they were good at the start and good at the finish, but they were atrocious in between." Which, in a large measure, explains why the other half of the starters failed to finish with perfect scores. When the mountains were reached the better stretches of roadway were like that side of Pen Mar known as the devil's race course; the worst parts cannot be described. Ruts, boulders, cliffs, holes, logs, marked them and the occupants were bumped, jolted and bruised, as well as soaked and drenched when the cars plunged into the many fords that had to be crossed.

The route on the out trip was from Baltimore to Westminster, through Fritzell, Tryone, Copperville, Taneytown, Bridgeport, Emmitsburg, Eyler, Lantz, Foxville, over the Blue Ridge mountains to Cavetown, to Shewsville, and then to Hagerstown, most of the cars arriving at the last named place before noon. So far as scenery is concerned a more beautiful route could not have been chosen. The return trip was made via Middletown, Frederick, New Market, Ridgeville, Ellicott City and finishing at Baltimore. The first car arrived at 2.30 p. m,, and the last car of the perfect scores checked in at 6.32. A shower was met on the way back, but it did not hinder the contestants. Twelve hours was the allotted time for perfect scores, and the sixteen that finished without marks against them were as follows:

Howard Gill, Thomas; Wallace Hood, Thomas; Hardesty, Packard; Lorido, Locomobile; McCormick, Oldsmobile; J. White, Buick; Tremblay, White; William Keyser, Packard; Hall, Franklin; Clarke, Pierce-Arrow; Foster, Cadillac; Cody, Thomas; R. F. Kayler, Ford; Barker, Packard, T. F. Goodwin, Winton, and P. Reese, Jr., Royal Tourist.

Program for the Giant's Despair Climb.

The hill climb committee of the Wilkes-Barre (Pa.) Automobile Club made known this week its program for the third annual Memorial Day hill climb up Giant's Despair mountain. It is even more elaborate than the card last year, and includes twelve events as follows: Open to gasolene stock cars selling for $850 or less; open to gasolene stock cars selling for from $851 to $1,250, inclusive; open to gasolene stock cars selling from $1,251 to $2,000; open to gasolene stock cars selling for from $2,001 to $3,000, inclusive; open to steam or gasolent stock cars selling for from $1,250 to $3,000; open to gasolene stock cars selling for from $3,001 to $4,000; open for four-cylinder stock cars selling for $4,000 or over; open to six-cylinder stock cars selling for $2,500 or over; free-for-all, open to cars of all types and motive power; open to gasolene stock chassis not exceeding a total piston area of 103.87 square inches, all Briarcliff models eligible; open to steam cars only; open to cars owned by members of the Quaker City Motor Club.

Four-Mile Circuit for a Road Race.

Although it has never been in favor of track racing the Indiana Automobile Club has signified that it is in favor of road racing by arranging a big race over a four mile circuit around Riverside Park, Indianapolis, on July 4th. Although the preliminary announcement has only been made many of the details have been worked out. The course selected is in view from a certain point for about three-quarters of the distance and here it is proposed to erect a big grandstand. It was announced that 150 special policemen will guard the course. Carl G. Fisher has offered a $500 trophy for the race which will be for stock chassis.

Albany to Have Its First Hill Climb.

The Albany (N. Y.) Automobile Club will hold its first hill climb on Menand hill, near that city, on Saturday afternoon, May 23d. Eight events are carded, as follows: Gasolene cars selling for $850 or less; gasolene cars selling from $851 to and including $1,250.; Gasolene cars selling from $1,251 to and including $2,000; gasolene cars selling from $1,251 to and including $3,000; steam, gasolene or electric cars selling from $2,001 to $3,000; gasolene cars selling from $3,000 to and including $4,000; six-cylinder cars selling for more than $4,000.

SAILORS TREATED TO A SANFEST

"Fighting Bob's" Men See Lively Racing at Long Beach—Close Contest in the Free for All Event.

One of the features of the entertainment of the fleet now in California was a race meet at Long Beach on Friday, 24th ult. Although no records were broken the thousands of sailors and officers, to say nothing of all the Long Beach resorters, thoroughly warmed up to the sport. A course 2½ miles long had been measured on the sand and the beach was hard and firm.

The most exciting event was the free-for-all for stock cars, which was won by George Barnes, driving a Haynes. Barnes took the lead at the start and was never headed although Harrison, in the Oldsmobile, gave him a hard fight right up to the tape. The race resulted in a challenge by Dan Kuhl, whose Mercedes had won the previous event, but when Barnes got the money ready, it is stated that Kuhl could not be found. The summaries:

For two cylinder runabouts carrying two passengers—Won by C. M. McKeague, Duro; second, D. W. Hawthorn, Dolson; third, J. McKenzie, Reo.

For two cylinder touring cars, carrying four passengers—Won by F. M. Varney, Tourist. Time, 3:41½.

For four cylinder cars, 20 to 40 horsepower, carrying four people—Won by H. O. Harrison, Oldsmobile; second, G. F. Grant, Tourist.

For touring cars carrying four people—Won by Dan Kuhl, Mercedes.

Free-for-all stock cars—Won by George Barnes, Haynes; second, H. O. Harrison, Oldsmobile. Time, 3:00⅗.

Motorcycle sweepstakes—Won by Allen Murphy, Indian; second, Clarence Clayton, Indian; third, Frank Klecker, Racycle.

Races to Celebrate Subway Extension.

That portion of Jamaica, Long Island, designated as Hillside avenue, will for once in the history of automobiling be free from arrests for speeding one day next month. There are, perhaps, more arrests made every Sunday over this road than on any other boulevard on Long Island, but on Friday afternoon, June 5th, the motorcycle policeman will be minus an occupation. In celebration of the extending of the Brooklyn subway to Jamaica the committee in charge of the jubilee has decided to promote a series of mile time trials on Hillside avenue. The fact that Fred J. Wagner virtually is in charge of the affair and that the Long Island Automobile Club is taking an active interest in it, presages success. The trials, for all classes of cars, will be held over a mile straightaway stretch, allowing one mile for a flying start and a mile beyond the tape to slow down.

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NEW TRACK-CARRYING TRACTOR

Radical Departures in Construction of Heavy Cross Country Vehicles—Features of the System Adopted.

Problems connected with motor traffic outside the confines of the highway are not, as a rule, of appreciable interest to the average motorist. Nevertheless in vehicles intended for use in connection with military manoeuvres and for agricultural purposes, they are of vast importance. Several different types of vehicle have been designed for cross country operation, all of which are based upon the principle of increasing the amount of surface in contact with the ground, and also of reducing the unit pressure on that surface. One of the most unique of these is the Hornsby "chain-track" tractor, which is produced by Messrs. Hornsby and Sons, makers of the Hornsby Akroyd heavy oil engines, which have been favorably known in England for many years. Its principle is that of laying down a temporary roadway or track over which the machine may run, and which is automatically picked up after use and transferred to the forward end of the machine to be used again. It differs from a system of similar nature, at one time proposed in this country, in that the track extends the full length of the vehicle and is so constructed that it acts as a sort of bridge, following the average grade of the ground, and therefore presenting a perfectly uniform path for the load-carrying wheels upon which the vehicle itself is carried.

As far as the construction of the power plant and the tractive and load carrying features of the vehicle are concerned, it is not radically different from the ordinary heavy commercial vehicle. It is, in fact, built for use with either heavy oil or gasolene, according to local demand and possessed the usual transmission and change gear features.

The "track" consists of an endless chain band, running over sheaves at the front and rear ends of the machine, and driven from one of the sheaves only. The interior of the chain, at all times presents a smooth path for the supporting wheels to roll upon, while the exterior is fitted with resilient supporting blocks, to afford traction and relieve the inequalities of the ground to a certain extent, as well.

From the accompanying illustration the general arrangement of the machine will be apparent. The chain, D, is carried by the sheaves, A, and B, the former of which is geared to the motor and drives the chain by the meshing of cogs on its periphery with the ends of the pins by which the members of the chain are articulated. The sheave, B, is moveable so that the tension of the chain may be adjusted according to requirement, while the slack of the upper side is taken up by an adjustable idler pulley, E. The entire weight of the vehicle is carried by the wheels, C, running on the track formed by the inner surface of the chain.

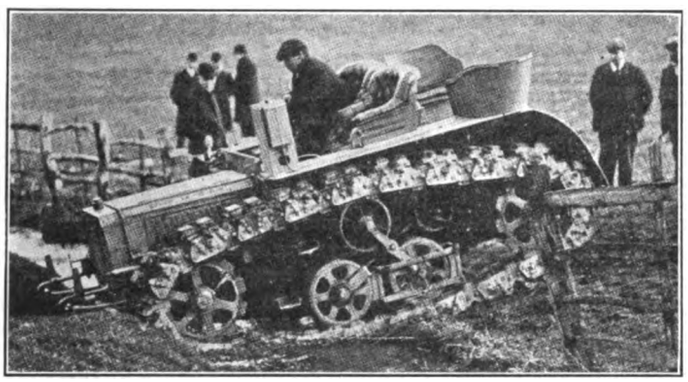
The design of the chain itself, is particularly unique. Two sets of links are incorporated in its construction. Those which may be termed the main links, consist of heavy castings, cored out on the under side to receive the wooden bearing blocks upon which the machine rests. Upon their upper surfaces they are channeled out to receive the bearing wheels, while at their ends are abutments, so constructd that while unlimited flexure is permitted in a downward direction, the links are rigidly placed with regard to pressures from below. In consequence of this, the lower part of the track at all times forms a sort of girder which is capable of supporting the machine from two or more points. Connection between the respective main links is accomplished by means of secondary links, of similar construction, which served the purpose of distance pieces. The arrangement indicated is applied to both sides of the machine, two complete tracks being formed in this way for the two sets of bearing wheels, and both being independent save for the driving connection, which is made through a differential gearing of ordinary form.

An unusual provision, is that by which steering is effected. In order to accomplish this, the rate of travel of the respective tracks is altered by applying a brake to one side or the other of the differential. This is done through the medium of an ordinary steering wheel, the effect being practically the same as would result from braking one of the wheels of a live axle. It is asserted by the Automobile Journal, in which an account of this machine recently appeared, that the steering device is so successful that it is possible to turn the tractor in its own length, inconceivable though it may seem.

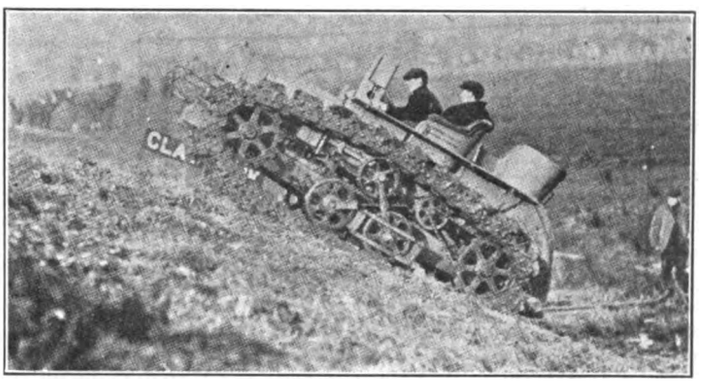
In regard to the performance of the tractor, the same authority mentions a test in which "On swampy ground, a 'lurry' loaded with three tons was hauled by five horses until it sank to the axles, when the horses failed to drag it out. The 30-35 horsepower motor car model, weighing 3 tons 15 cwt., and hauling a trailer loaded with five tons, and equipped with the chain track in lieu of wheels, then proceeded to travel over the same ground, and negotiated it successfully. Horses were subsequently harnessed to the car itself, and succeeded in dragging it across the test ground, notwithstanding the fact that they had failed with the lurry, and also with a two-wheeled cart carrying 1½ tons.

"As a test of its hill climbing capacity, the Chain-Track tractor showed itself to be capable of surmounting a bank of soft clay 20 feet high, having an incline of 1 in 2."

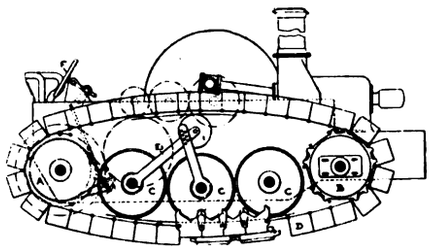
At present three of these machines are in use. One is in operation by the British War Office, and it is stationed at Aldershot, where it is known as "Caterpillar No. 1." Of the two others, one of 20 horsepower, is propelled by an oil engine, while the second, which is shown in the accompanying illustration, is of 30-35 horsepower and driven by a gasolene motor.



GOING IN AND OUT OF A BROOK



CLIMBING A "ONE IN TWO" CLAYBANK



35 HORSEPOWER TRACTOR

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SOLVING "USED CAR" PROBLEM

Bowen States a General Difficulty and Explains His System—Making Cars Dependable as Well as Saleable.

"The Motor World's editorial on the 'Used Car Situation' was of especial interest to us because, like a good many other automobile firms, we have been endeavoring to find the right solution of this problem for some time paast," was the observation of Frank H. Bowen, of the Harry S. Houpt Co., New York and New Jersey agents for the Thomas car to a Motor World man. Mr. Bowen's official title being that of "Manager, Used Car Department," his version of the problem itself, and the method of solving it with which he is most familiar, naturally carry no little weight.

"The practice of turning over all second-hand cars to dealers, who make a specialty of handling them, has resulted in their being sold and put on the road without any preparation whatever, although generally in need of a thorough overhauling," he continued, "and a total break-down is bound to result in a short time. The new owner is naturally disgusted, and invariably places the blame on the car itself. In view of this fact we have evolved the following plan, which has eliminated this objectionable feature.

"As soon as the car which has been taken in exchange is received, it is taken down in our own shop, all parts showing wear or misuse are replaced by new parts, and the entire car is reconstructed, taking every bolt and nut into consideration. The car is then taken to the paint shop, where it is entirely repainted and the upholstery redressed.

"When the car has received the final test, both in the shop and on the road, it is placed on sale on the 'used car floor,' at a price which is plainly marked, and from which there is no deviation.

"Our policy is that the owner of a Thomas car is a Thomas customer. The same attention to the upkeep of a second hand car will be given to the new owner as would have been given to the original owner.

"Though this policy has been in force but a short time," he concluded, "these cars have been sold to a very different class of customers than ever before purchased second-hand cars. In fact, the system has brought us into touch with a class of buyers who, in the past would not consider any but a new car."

Paris Shies at Shabby Buses.

Motor omnibuses in Paris are not as popular as they are in London, or other great cities, it would appear, owing to the economical policy of the operating company, which has refused up to this time to install a proper equipment, or to accede to the demands of the riding public and the landlords along the routes. Consequently the stock of shabby vehicles, said to number not more than a hundred, continues to ply the streets under a growing cloud of disfavor. The unpopularity of the vehicles is due solely to the fact of their being mechanically unfitted for the service which is expected of them, and it is thought that a better equipment would not suffer the same oprobrium. The root of the difficulty rests in the fact that the concession of the Paris Omnibus Co., is to expire in 1910, and that negotiations for the renewal of its monopoly have not as yet been completed.

When the company was persuaded, somewhat tardily, to adopt the use of motor vehicles, instead of ordering a complete new installation of rolling stock, the chassis were specified to fit the bodies of the old three-horse omnibuses, of which a great number were already on hand. Consequently the vehicles are unwieldy and unsightly. This fact, added to the poor maintenance afforded them is responsible for their low standing at present. The public complains of their cramped and vibrating accommodations, while the shopkeepers along their courses complain of the dust they stir up in dry weather and the mud they sling when it rains. That brand of economy which is characterized by its penny-wisdom and pound folly, never is destined to succeed where the traveling public is concerned.

Franklin Truck to be Fitted to Rails.

The possible usages of the motor truck seem to be almost unlimited. The H. H. Franklin Mfg. Co., through the Quaker City Automobile Co., their Philadelphia dealers, have just sold one of their 2,000-pound trucks to the Thacker Coal & Coke Co. This truck will be fitted with wheels with steel flanged rims and will be run upon railroad tracks throughout the Pennsylvania mines and shipping yards of the Thacker Co.

War Department Calls for Supply Wagon.

Specifications have been issued by the War Department covering the construction of a supply wagon for use by the signal corps of the United States army. As evidence of the satisfactory service Franklin motor cars have already given in the service of the United States Government, the Franklin people point out that the specifications for this supply wagon calls for a 24 horse-power air-cooled motor.

The Oakland Car Working Its Way East.

One of the smartest and most attractive cars ever offered for the price, the Oakland, the latest creation of A. P. Brush, has been unduly long in gaining a foothold in the East. A beginning has been made, however, the Bergdoll Motor Co., of Philadelphia, having been allotted a choice parcel of eastern territory and negotiations being under way for New York representatives.

MAY MEAN NEW IGNITION SYSTEM

Phenomenal Qualities Ascribed to Recently Discovered German Alloy—Its Alleged Free Yield of Sparks.

It it possible that the application of a phenomenon which is at present attracting no little attention in German scientific circles may ultimately lead to the extinction of the electric equipment in connection with the ignition system of the internal combustion motor. If practicable, it would lead to the adoption of an igniter similar to the old-time flint-lock of small-arm history.

"It has been discovered" according to Consular authority, "that an alloy of iron and cerium, lanthanium, or any other of the rare earths (as used in manufacturing incandescent gas mantles) will create luminous sparks on being struck with some metal tool, such as a knife edge, a file, or the like. The shower of sparks given off at the point of impact is sufficient to ignite not only gas, but even a cotton wick saturated with alcohol, and it is possible to utilize these iron alloys for igniting all sorts of explosives. The behavior of these alloys has been found to vary according to their percentage of iron, the sparking reaching a maximum with a content of 30 per cent."

Such a development would seem almost too economical to be a commercial possibility. At the same time, it is by no means inconceivable that the hammer and anvil igniter with striking points composed of alloys of rare earth and iron may be a feature characterizing motor equipments of the future.

Self-Applying Anti-Skid Shoe.

A recent foreign invention in the non-skid line, is constructed in persuance of a scheme which has been tried on the London omnibuses, in which a chain is suspended along side each of the rear wheels in such a way that when any side slip is developed the chain is pulled under the tire and offers sufficient resistance to check the action. In the new system, a leather strap is employed, which is suspended from a couple of springs attached to the axle in such a way that the center of the loop thus formed lies close along side the tire on the inside of the wheel. A flat plate, made of leather and copiously studded, is attached to the strap at this point, with an offset edge projecting toward the tire. When the skidding tendency is developed, this shoe is immediately drawn under the wheel and forms a positive hindrance to the objectionable action. While more crude, and probably less satisfactory in action, it is to be observed that such an arrangement would possess this advantage over the ordinary anti-skid tire, that present objectionable park ordinances would not affect its use.

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FRELINGHUYSEN'S "MASTERPIECE"

Full Text of Revised New Jersey Law—Commissioner Smith Will Recognize Unexpired Licenses.

New Jersey's revised system of "admission fees" and "passports," otherwise the amended Frelinghuysen law, now is in full force, and J. B. R. Smith, the able Commissioner of Motor Vehicles, has his hands full in putting it into effect.

Although one arrest has been made of an automobilist who had a paid-up license under the old law, Mr. Smith has ruled that such licenses and registration certificates shall hold good until one year from their dates. For instance, any "passport" that does not expire until July or September next will be recognized, but for the remainder of the year, the holder must pay the full rate named by the new law.

The full text of the law is as follows:

PART I.

Definitions.

1. As used in this act:

(1) The term "motorvehicle" includes all vehicles propelled otherwise than by muscular power, excepting such vehicles as run only upon rails or tracks.

(2) The term "motor cycle" includes only motor vehicles having pedals and saddle with driver sitting astride.

(3) The term "automobile" includes all motor vehicles excepting motor cycles.

(4) The word "magistrate" shall be deemed and understood to mean and include all justices of the peace, judges of the city criminal courts, police justices, recorders, mayors and all other officers having the power of a committing magistrate.

2. Automobile fire engines and such self-propelling vehicles as are used neither for the conveyance of persons for hire, pleasure or business, nor for the transportation of freight, such as steam road rollers and traction engines, are excepted from the provision of this act.

PART II.

The Construction and Equipment of Motor Vehicles.

3. Every motor vehicle must be equipped with a plainly audible signal trumpet.

4. (1) Every automobile shall carry, during the period from thirty minutes after sunset to thirty minutes before sunrise, and whenever fog renders it impossible to see a long distance, at least two lighted lamps, showing white lights, visible at least two hundred and fifty feet in the direction towards which said automobile is proceeding, and shall also exhibit one red light, visible in the reverse direction. Upon the fronts of the two aforesaid lamps showing white lights shall be displayed, in such manner as to be plainly visible when such lamps are lighted, the number of the registration certificate issued as in this act provided, the same to be in Arabic numerals not less than one inch in height.

(2) Every motorcycle shall carry, during the period from one hour after sunset to one hour before sunrise, and whenever fog renders it impossible to see a long distance, at least one lighted lamp, showing a white light visible at least two hundred feet in the direction toward which the motorcycle is proceeding.

5. Automobiles of more than ten horsepower shall be provided with at least two brakes, powerful in action and separated from each other, of which one brake must act directly on the drive wheels or on the parts of the mechanism which are firmly connected with the wheels. Each of the two brakes must suffice alone to stop the automobile within a proper time. One of the two brakes must be so arranged as to be operated with the foot; provided, however, that on automobiles not exceeding ten horsepower one brake will be sufficient.

Motorcycles shall be provided with at least one brake, which may be operated by hand.

6. No motor vehicle tire shall be fitted with a chain when used upon gravel, macadam or other made roads, except upon natural dirt, asphalt, cobble, Belgium block or vitrified brick pavements; provided, however, that tires may be fitted with a chain when used upon roads covered with a coating of at least one inch of snow or ice.

7. Every motor vehicle must have devices to prevent excessive noise, annoying smoke and the escape of gas and steam, as well as the falling out of embers or residue from the fuel.

PART III.

Department of Motor Vehicle Registration and Regulation.

8. The Secretary of State shall forthwith organize in connection with the Department of State the department of motor vehicle registration and regulation. He shall provide suitable quarters for the same and shall furnish all necessary supplies and equipment for the proper enforcement of the provisions of this act. He shall approve all bills for disbursement of money under any of the provisions of this act, which shall be paid by the State Treasurer, upon the warrant of the Comptroller out of any appropriation regularly made therefor.

9. The Assistant Secretary of State shall be ex-officio commissioner of motor vehicles, and shall have personal charge and supervision of the enforcement of the provisions of this act. The Commissioner of Motor Vehicles shall appoint a chief inspector of motor vehicles, who shall be chief clerk of the department, and who shall have practical knowledge of the mechanical arrangement and capabilities of all kinds of motor vehicles, and be capable to pass upon the efficiency of motor vehicles and the competency of motor vehicle drivers. The Commissioner of Motor Vehicles shall also appoint as many inspectors, not exceeding ten, as may be necessary in detecting violations of this act, in obtaining evidence of violations and otherwise assisting in the enforcement of the act. The said inspectors shall be chosen with especial reference to their fitness for the work, and shall be required to submit themselves to such an examination as the Commissioner of Motor Vehicles shall provide, and shall be equipped, at his discretion, with motorcycles or other means of conveyance. The Commissioner of Motor Vehicles shall organize the inspector force with the chief inspector at its head, and shall adopt such rules and regulations for the regulation of the inspector force as shall appear desirable, and shall exercise the power of suspension, and when necessary, of discharge of inspectors for failure to comply with the rules of the department, or for any other cause. He shall fix the compensation of these inspectors, but in no case shall such compensation exceed three dollars per day. The Commissioner of Motor Vehicles shall also have the power to appoint any number of citizens, not exceeding twenty, who shall be interested in the proper enforcement of this act, and who shall be known as special inspectors, not more than two of whom shall be residents of any one county. They shall serve without pay, and shall have all the power and authority of the paid inspectors as stated in this act. The Commissioner of Motor Vehicles shall also fix the compensation of clerical assistants and others employed under this act. The compensation of the Commissioner of Motor Vehicles shall be fifteen hundred dollars per annum, in addition to any compensation he may receive by reason of any statute fixing the compensation of Assistant Secretary of State, and that of the chief inspector shall be fifteen hundred dollars per annum.

10. The Commissioner of Motor Vehicles shall be authorized, and full power and authority are hereby given to him, to designate the chief of police and the lawful deputy of said chief of police of any municipality in this State, or any other proper person, to be the agent of the said Commissioner of Motor Vehicles, for the registering of motor vehicles and issuing registration certificates, and for the examining of applicants for licenses to drive motor vehicles, and the granting of licenses to said applicants, subject to the requirements of this act and to such rules and regulations as shall be imposed by the commissioner; and any chief of police and deputy who may be so designated are hereby authorized and required to act according and until the said authority so to act is revoked by the said commissioner. The fee allowed such agent for registration certificates so issued by him, and for every license so granted by him, shall be fixed by the inspector of motor vehicles, the same to be retained from the registration fee or the license fee paid to him; provided, however, that every registration and registration certificate and every license to drive motor vehicles may be revoked by the said commissioner of motor vehicles for a violation of any of the provisions of this act, or on other reasonable grounds, after due notice in writing of such proposed revocation and the ground thereof, and if a driver of motor vehicles shall have had his license revoked, a new license granted to him within one year thereafter shall be void and of no effect unless it shall be granted by the said commissioner of motor vehicles in person; and if the registration or registration certificate of any motor vehicle shall have been revoked, a new registration made, or new registration certificate issued within one year thereafter shall be void and of no effect unless the new registration shall be made and the new certificate issued under the personal direction of the commissioner of motor vehicles.

11. The commissioner of motor vehicles shall be authorized, and full power and authority are hereby given to him, to license, at his discretion and upon payment of the lawful fee, any proper person of the age of sixteen years or over to be a motor vehicle driver, said commissioner or his agent having first examined said person and being satisfied of his ability as an operator, which examination shall include a test of the knowledge on the part of the said person of such portions of the mechanism of motor vehicles as is necessary, in order to insure the safe operation of a vehicle of the kind or kinds indicated by the applicant, and the said applicant having demonstrated his ability to operate a vehicle of the class designated; and the said commissioner of motor vehicles may, in his discretion, refuse to grant a license to drive motor vehicles to any person who shall, in the estimation of said commissioner, be an improper person to be granted such a license; and the said commissioner shall have power to grant a registration certificate to the owner of any motor vehicle, application for registration having properly been made and the fee therefor paid, and the vehicle being of a type that complies with the requirements of this act. But it shall be lawful for the said commissioner of motor vehicles to refuse registration to any vehicle that, in his estimation, is not a proper vehicle to be used upon public roads and highways of this State.

12. The commissioner of motor vehicles shall have such power and duties as are in this act given and imposed, and shall collect such data with respect to the proper restrictions to be laid upon motor vehicles, and the use thereof upon the public roads, turnpikes and thoroughfares, as shall seem to be for the public good, and under the direction of the Secretary of State shall report to each Legislature the operations of his office for the year ending on the next preceding thirty-first day of December. It shall be his duty to attend to the enforcement of the provisions of this act.

13. The commissioner of motor vehicles shall keep a record of all his official acts, and shall preserve copies of all decisions, rules and orders made by him, and shall adopt an official seal. Copies of any act, rule, order or decision made by him, and of any paper or papers filed in his office, may be authenticated under said seal, and when so authenticated shall be evidence equally with and in like manner as the originals, and said commissioner shall be empowered to communicate with the police departments and peace officers in the State for the purpose of and with the object of the proper enforcement of this act.

14. Motor vehicle inspectors may be appointed, as provided in section nine of this act, and shall be presented with a badge indicative of their office, and when wearing such badge on the left breast of the outermost garment shall have power to stop any motor vehicle and examine the same to see that it complies with the requirements of this act, whether in matter of equipment, identification or otherwise; to require the production of the license of the driver; to arrest, without warrant, for violations of this act committed in their presence, and generally to act as special officers for the enforcement of the provisions of this act and for the detection and arrest of those who violate or infringe upon the provisions hereof.

PART IV.

The Operation of Motor Vehicles.

15. No person shall drive a motor vehicle, the owner of which vehicle shall not have complied with the provisions of this act concerning the proper registration and identification of the same; nor shall any person drive a motor vehicle which shall display on the front or back thereof a fictitious number, or a number other than that designated for such motor vehicle in the New Jersey registration certificate of such motor vehicle.

This section shall not apply to the owners or drivers of automobiles licensed pursuant to subdivision three of section sixteen of this act, but such automobiles licensed under said section shall at all times display on the back thereof the registration number of said automobile under the laws of the State in which the business of the owner shall be conducted, as provided in the said section, and no other number shall be required or shall be displayed upon the said automobile.

16. (1) Every resident of this State and every nonresident, whose automobile shall be driven in this State, shall, before using such vehicle on the public highways, register the same, and no motor vehicle shall be driven unless so registered. Every registration shall expire and the certificate thereof become void on the thirty-first of December of each year; provided, it may be lawful for any automobile duly registered, to operate under said registration certificate for a period not exceeding thirty-one days after the expiration of said registration certificate. Such registration shall be made in the following manner: A statement in writing shall be made to the Commissioner of Motor Vehicles, or his lawful agent, containing the name and address of such owner, together with a brief description of the character of such automobile, including the name of the maker and the manufacturer's number, and the rated horsepower. The applicant shall pay the Commissioner of Motor Vehicles for each registration, a fee of three dollars for automobiles of the first class; five dollars for the second class; and ten dollars for the third class. Automobiles of ten horsepower or less, shall be of the first class; from eleven to twenty-nine horsepower, inclusive, of the second class; and of thirty horsepower or more, of the third class. The Commissioner of Motor Vehicles shall issue for each automobile so registered a certificate properly numbered, stating that such automobile is registered in accordance with law, and shall cause the name of such owner with his address and the number of his certificate and description of such automobile to be entered on the records of his department in alphabetical and numerical order. The Commissioner of Motor Vehicles may refuse registration in the case of any automobile that shall not comply with the requirements of this act or that shall seem to him unsuitable for use on the roads and highways of this State. Each owner having a residence outside of the State shall file with the Secretary of State a duly executed instrument, constituting the Secretary of State and his successors in office, the true and lawful attorney upon whom all original process in any action or legal proceeding caused by the operation of his registered motor vehicle, within this State, against such owner may be served, and therein shall agree that any original process against such owner shall be of the same force and effect as if

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served on such owner within this State; the service of such process shall be made by leaving a copy of the same in the office of the Secretary of State with a service fee of two dollars to be taxed on the plaintiff's costs of suit. Said Commissioner of Motor Vehicles shall forthwith notify such owner of such service by letter directed to him at the post office address stated in his application. Upon any and every transfer of a registered automobile by the owner thereof, in whose name the same is registered, the said registration and certificate thereof shall forthwith be and become void; but the same may be validated by the endorsement of the Commissioner of Motor Vehicles, the purchaser having made written application therefor and paid a transfer fee of one dollar.

(2) Every resident who is the owner of a motorcycle, and every non-resident whose motorcycle shall be driven in this State, shall pay an annual registration or license fee of two dollars for such motorcycle, which shall include the right of such person to drive such motorcycle within this State without an examination of his ability to run a motorcycle, unless such an examination be required by the Commissioner of Motor Vehicles; and such owner shall be given a registration certificate, in which shall be designated the proper registration number, and such certificate shall expire on the thirty-first of December of each year, unless revoked by the Commissioner of Motor Vehicles, or as otherwise provided by this act.

(3) Every person or corporation regularly engaged in the business of carrying passengers for hire by means of automobiles, which business shall be conducted in a State adjoining the State of New Jersey, and the conduct of which business shall require such automobile to enter the State of New Jersey for said purposes shall make application, which application shall be in the form of a sworn statement, signed and sworn to by the applicant, or if the said applicant be a corporation, by an officer of the said corporation, and shall specify the number of automobiles which shall be operated in connection with the said business, the type and motive power of each, and the registration number of each under the laws of the adjoining State in which said business shall be connected, the Commissioner of Motor Vehicles shall issue to the said applicant, upon the payment of a fee of one hundred dollars, a registration certificate, which shall have endorsed thereon the type and State registration number of each of the said automobiles, and which shall permit the said automobiles to be operated within the State of New Jersey for a distance of not to exceed fifteen miles from the point of entry in the State; provided, however, that not more than fifteen of the said automobiles shall be within the State of New Jersey at any one time, and that no automobile shall be included under the provisions of such registration certificate unless the same is duly registered and licensed under the laws of the State in which such business is being conducted.

(4) Every manufacturer of or dealer in automobiles residing and having his principal place of business within this State, instead of registering each automobile owned or controlled by him, may make application, as hereinbefore provided in this section, for a registration number, and the written statement, in addition to the matters hereinbefore contained, shall state that he is a manufacturer or dealer, as the case may be; that he desires to use a single number on automobiles owned or controlled by him while being used for demonstrating purposes. The Commissioner of Motor Vehicles may thereupon, if satisfied of the facts stated in said application, issue a certificate as herein set forth assigning the same a number, which certificate shall contain a statement that the same is issued to the applicant as a manufacturer or dealer, as the case may be. One certificate shall cover and be valid for the use of not more than five automobiles of said manufacturer or dealer at one time while under his control. The Commissioner of Motor Vehicles shall provide five sets of identification marks of the general style and kind hereinbefore provided for motor vehicle registrations, and such identification marks shall not be used on any vehicle not actually owned by said manufacturer or dealer or operated either by him or his duly authorized agent. All such automobiles shall be regarded as registered under such general number, and in addition to the registration number displayed on the front and rear of the car as hereafter provided, there shall be added the letter "M", of equal size and prominence. The annual fee for such manufacturer's or dealer's registration shall be five dollars for each car so authorized to be operated under such registration number, and the Commissioner of Motor Vehicles shall issue registration certificates in duplicate equal to the number of cars not exceeding five authorized to be operated under said registration number.

17. No person shall hereafter drive an automobile upon any public highway in this State, unless licensed to do so in accordance with the provisions of this act. No person under the age of sixteen years shall be licensed to drive automobiles, nor shall any person be licensed to drive automobiles until said person shall have passed a satisfactory examination as to his ability as an operator, which examination shall include a test of the knowledge on the part of said person of such portions of the mechanism of automobiles as is necessary in order to insure the safe operation of a vehicle of the kind or kinds indicated by the applicant. Drivers' license certificates shall expire on the thirty-first of December of each year. Said licensee shall be entitled to drive any registered automobile of the horsepower or of a lesser horsepower than that for which he is licensed, but not greater. There shall be two classes of drivers' licenses. Those authorizing the licensee to drive cars of less than thirty horsepower shall be of the first class, and those authorizing the licensee to drive cars of thirty and greater horsepower, shall be of the second class. The annual license fee to be charged shall be two dollars for drivers of the first class, and four dollars for drivers of the second class. If an automobile has more than one rating of horsepower, all fees shall be reckoned at the highest rating. Provided, however, that the Commissioner of Motor Vehicles shall, upon the application of any person who or corporation which shall have complied with the provisions of sub-division three of section sixteen of this act, issue to the said person or corporation a sufficient number of special drivers' certificates, which shall have endorsed thereon the registration number under the laws of the adjoining State in which the business of the said applicant shall be conducted of each of the automobiles of said applicant included in and covered by any license certificate issued pursuant to said sub-division three of section sixteen of this act, and which, when duly countersigned by a special agent appointed for that purpose by the said Commissioner of Motor Vehicles pursuant to the provisions of section ten of this act, shall authorize and permit the person to whom the same is issued to operate any of the automobiles registered under the laws of such adjoining State, the registration numbers of which shall appear endorsed upon the said certificate, and no others within the State of New Jersey, for a period of not to exceed twenty-four hours at any one time. Such driver shall at all times when operating any of the said vehicles within the State of New Jersey have in his possession the said certificate, and shall, whenever requested so to do, exhibit the same to any motor vehicle inspector or police officer or constable within the said State of New Jersey; no other certificate of registration shall be required of the said driver and the preceding provisions of this section shall not be applicable to him.

18. Each license to drive an automobile shall specify the maximum horsepower of the automobile allowed to be driven thereunder, and shall have endorsed thereon in the proper handwriting of the licensee the name of said licensee. And said licensee when thereupon requested by any motor vehicle inspector or magistrate, while in the performance of the duties of his office under this act, shall exhibit said license to said officer and write his name in the presence of said officer, to the end that he may thereby determine the identity of said licensee.

19. No intoxicated person shall drive a motor vehicle.

20. No person shall drive a motor vehicle without the consent of the owner.

PART V.

Identification Marks of Motor Vehicles.

21. The owner of every automobile which shall be driven on the public highways of this State shall display on the front and rear of such vehicle, not less than fifteen inches or more than thirty-six inches from the ground an identification mark to be furnished by the motor vehicle department; provided that the said motor vehicle department shall not be required to furnish such identification mark to any motor vehicle already registered, prior to June first; and such motor vehicle so registered shall be permitted to display any identification mark lawful at the time of the passage of this act prior to said June first. Said identification mark shall contain the number of the registration certificate of said vehicle in characters not less than four inches in height with a stroke of not less than one-half an inch, and shall be of such design as shall be prescribed by the Commissioner of Motor Vehicles. On the tag shall be, in smaller characters, the manufacturer's number of the car, certified by the Commissioner of Motor Vehicles. The identification marks of vehicles shall be either of metal or leather, sufficiently enduring to be plainly legible under all atmospheric conditions for at least one year. Motorcycles shall also display such identification marks on the front and side thereof as the Commossioner of Motor Vehicles shall prescribe. All identification marks shall be kept clear and distinct and free from grease, dust, or other blurring matter, so as to be plainly visible at all times during daylight and at night.

PART VI.

Use of Roads and Highways.

22. (1) Drivers of motor vehicles, whether of burthen or of pleasure, using any of the turnpikes or public roads in this State, when met by another motor vehicle, or by a carriage, sleigh, or sled, shall keep to the right, and when overtaken by another motor vehicle, carriage, sleigh or sled they shall likewise keep to the right, so as in both cases to permit such motor vehicle, carriage, sleigh or sled, either met or overtaken, to pass uninterrupted.

(2) No owner or purchaser or driver of a motor vehicle who shall have complied with the requirements and provisions of this act shall be required to obtain any other license or permit to use or operate the same, nor shall such owner or purchaser or driver be excluded or prohibited from or limited in the free use thereof, nor limited as to speed upon any public street, avenue, road turnpike, driveway, parkway or other public place, at any time, when the same is or may hereafter be opened to the use of persons having or using other carriages, nor be required to comply with other provisions or conditions as to the use of said motor vehicle, except as in this act provided; provided, however, that nothing in this section contained shall be construed to apply to or include any speedway created and maintained in pursuance of an act of the Legislature of the State of New Jersey entitled "An act to provide for the construction and maintenance of speedways in the counties of this State," approved March nineteenth, one thousand nine hundred and two; nor to any parks or parkways created and maintained in accordance with an act of the Legislature of the State of New Jersey entitled "An act to establish public parks in the counties of this State and to provide for the acquirement, improvement and regulation of the same," approved March twentieth, one thousand nine hundred and one. No city, town, township, borough or other municipality shall have power to make any ordinance, by-law or resolution limiting or restricting the use or speed of motor vehicles, and no ordinance, by-law or resolution heretofore or hereafter made by any city, town, township, borough or other municipal or local authority by whatever name known or designated in respect to or limiting the use or speed of motor vehicles shall have any force, effect or validity.

(3) No person shall drive a motor vehicle upon any public street, public highway, public road, public parkway, turnpike or public driveway in this State in a race or on a bet or wager.

(4) Every driver of a motor vehicle, after knowingly causing an accident by collision or otherwise knowingly injuring any person, horse, or vehicle shall forthwith bring his motor vehicle to a full stop return to the scene of accident and give to any proper person demanding the same his name, the number of his driver's license and the registration number of the motor vehicle, and the names and residences of each and every male occupant of said motor vehicle.

PART VII.

Provisions Concerning Safety of Traffic.

23. The following rates of speed may be maintained, but shall not be exceeded, upon any public street, public road or turnpike, public park or parkway, or public driveway, or public highway, in this State by anyone driving a motor vehicle.

(1) A speed of one mile in seven minutes upon the sharp curves of a street or highway or when turning a corner, and a speed of one mile in four minutes at the junction or intersection of a prominent cross-road where such a street, road or highway passes through the open country. The term "open country" meaning where houses are an average more than one hundred feet apart.

(2) A speed of one mile in five minutes where such street or highway passes through the built-up portion of a city, town, township, borough or village where the houses are on an average less than one hundred feet apart.

(3) A speed of one mile in four minutes within two hundred feet of any horse or other beast of draught or burden upon the same street or highway; provided, however, that such speed not exceeding twenty miles per hour, shall be lawful in the open country as may be necessary in order to pass a vehicle traveling in the same direction, but the speed shall be diminished forthwith if necessary to comply with the provisions of this act.

(4) Elsewhere and except as otherwise provided in subdivisions one, two and three of this section a speed of one mile in three minutes; provided, however, that nothing in this section contained shall permit any person to drive a motor vehicle at any speed greater than is reasonable, having regard to the traffic and use of highways, or so as to endanger the life or limb or to injure the property of any person; and it is further provided, that nothing in this section contained shall affect the right of any person injured, either in his person or property, by the negligent operation of a motor vehicle to sue and recover damages as heretofore; and provided further, that the foregoing provisions concerning the speed of motor vehicles shall not apply to any speedway built and maintained for the exclusive use of motor vehicles, if the said speedway at no point crosses any public street, avenue, road, turnpike, driveway or other public thoroughfare or any railroad or railway at grade, the said speedway having been constructed with the permission of the commissioners or the board of freeholders, as the case may be, of the county or counties in which said speedway shall be located; and provided further, that every person driving a motor vehicle shall, at request or upon signal by putting up the hand or otherwise from a person riding or driving a horse or horses in the opposite direction, cause the motor vehicle to stop and remain stationary so long as may be necessary to allow said horse or horses to pass.

24. If a physician shall have his motor vehicle stopped for exceeding the speed limit while he is in the act of responding to an emergency call, the registration number of the vehicle and the driver's license number may be inspected and noted, and the physician shall then be allowed to proceed in the vehicle to his destination, and subsequently such proceedings may be taken as would have been proper had the person violating the provisions as to speed not been a physician.

25. Motor vehicles belonging to the military establishment, while in use for official purposes in time of riot, insurrection, or invasion, and motor vehicle inspectors appointed under this act, are exempt from the provisions of this act pertaining to speed.

PART VIII.

Proceedings.

26. (1) A complaint having been made in writing and duly verified, that any person has violated any of the provisions of this act, any magistrate of the county, or recorder or police magistrate of any municipality, in which the offense is committed may, within thirty days after the commission of said offense, issue either a summons or a warrant directed to any constable, police officer, the inspector of motor vehicles or the commissioner of motor vehicles of this State, for the appearance or arrest of the

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person so charged; and the magistrate shall state what section or provision of this act has been violated by the defendant, and the time, place and nature of said violation, and upon the return of said summons or warrant the said magistrate shall proceed, in a summary way, to hear and determine the guilt or innocense of such person, and upon conviction, may impose upon the person so convicted the penalty, by this act prescribed, together with the costs of prosecution for such offense.

(2) Such magistrate, upon receiving complaint in writing, duly verified, of the violation of any provision of this act by any corporation, is hereby authorized and required to issue a summons directed to any constable, police officer the inspector of motor vehicles, or the commissioner of motor vehicles, of this State, requiring such corporation to be and appear before said magistrate on a day therein named, to answer to said complaint, which said summons shall be served on the president, vice-president, secretary, superintendent or manager of such corporation, or the agent upon whom other process against it may be served, at least five days before the time of appearance mentioned therein, and thereafter proceedings shall be the same as against individuals, except where a different procedure is provided by this act.

27. Any hearing to be held pursuant to this act shall, in the request of the defendant, be adjourned for a period not exceeding thirty days from the return day named in any summons, or from the return of any warrant, or from the date of any arrest without warrant, as the case may be, but in such case it shall be the duty of the magistrate to detain the defendant in safe custody, unless he shall make a cash deposit or enter into a bond to the State of New Jersey, with at least one sufficient surety (unless said defendant shall himself qualify and justify, in real estate security situate in this State, in twice the amount fixed by said magistrate for bond with a surety), to or in an amount not exceeding five hundred dollars, conditioned for his appearance on the day to which the hearing may be adjourned, and thence from day to day, until the case is disposed of; and such bond, if forfeited, may be prosecuted by the commissioner of motor vehicles in any court of competent jurisdiction; and such cash deposit, if forfeited, shall be paid to said commissioner of motor vehicles by said magistrate with whom the same shall have been deposited, to be by said commissioner disposed of as are other moneys coming to his hands under the provisions of section thirty-seven of this act; provided, however, that in lieu of said bond or cash deposit the person under arrest may leave with the magistrate the motor vehicle owned or driven by the said person.

28. The defendant in any proceeding instituted under this act may appeal from the judgment or sentence of the magistrate to the Court of Common Pleas of the county in which such proceeding shall have taken place; provided, the said defendant shall, within ten days after the date of said judgment, deliver to the magistrate a bond to the State of New Jersey, with at least one sufficient surety, or make a cash deposit with him of such amount as the magistrate shall direct, not exceeding the amount of five hundred dollars (unless said defendant can himself qualify and justify in real estate security in this State in twice said amount), conditioned to stand to and abide by such further order or judgment as may thereafter be made against the said party; and provided further, that if the said magistrate shall have imposed a sentence of imprisonment, the defendant, if he does not duly appeal, shall be imprisoned forthwith upon the imposing of said sentence but that an appeal, properly taken in accordance with the provisions of this act, shall be a stay of and upon the enforcement of a sentence of imprisonment, whether the execution of such sentence shall have been entered upon or not, as well as of such other judgment as may be pronounced; and provided further, that in lieu of the appeal bond in this section specified, and of the cash deposit therein provided for, the defendant may leave with the magistrate the motor vehicle owned or operated by the said defendant; and provided further, that if said defendant shall, after the rendition of said judgment or sentence, announce to said magistrate his intention to appeal therefrom, and either give the bond, make the deposit or leave the motor vehicle as herein provided, he shall have ten days from the date of the rendition of said judgment or sentence within which to complete his appeal, during which said ten days the execution of whatever sentence or judgment shall have been rendered, whether of imprisonment or fine, shall be stayed, and in case said defendant shall fail to complete his appeal within said ten days, the like proceedings may be had as would by the provisions of this act follow an appeal taken and a judgment of affirmance thereupon.

29. Whenever an appeal shall be taken as aforesaid it shall be the duty of the magistrate to send all papers and all moneys, if any, deposited according to the provisions of this act, and all money paid for costs of prosecution, together with a transcript of the proceedings in the case, to the next Court of Common Pleas of the said county, which court shall, de novo, and in a summary way, try and determine all such appeals, and in case the judgment or sentence of the magistrate shall be reversed on such appeal, the said Common Pleas Court shall order the return of all money deposited as aforesaid, and all costs of prosecution paid by said defendant to said defendant.

30. Proceedings under this act may be instituted on any day of the week, and the institution of such proceedings on Sunday shall be no bar to the successful prosecution of the same; and any process served on Sunday shall be as valid as if served on any other day of the week.

31. All proceedings for the violation of the provisions of this act shall be entitled and shall run in the name of the State of New Jersey, with the commissioner of motor vehicles or a motor vehicle inspector, or a police officer, or a constable, or such other person as shall by complaint institute the proceedings as prosecutor; and any magistrate may, at his discretion, refuse to issue a warrant on the complaint of any person other than the commissioner of motor vehicles or a motor vehicle inspector, until a sufficient bond to secure costs shall have been executed and delivered to the said magistrate.

32. (1) Any constable, or police officer, or motor vehicle inspector or the commissioner of motor vehicles is hereby authorized to arrest without warrant any person violating in the presence of such constable, or police officer or motor vehicle inspector or the commissioner of motor vehicles any of the provisions of this act, and to bring the defendant before any magistrate of the county where such offense is committed. The person so offending shall be detained in the office of the magistrate until the officer making such arrest shall make oath or affirmation, which he shall do forthwith, declaring that the person under arrest has violated one or more of the provisions of this act, and specifying the provision or provisions violated, whereupon said magistrate shall issue a warrant returnable forthwith, and the said magistrate shall proceed summarily to hear or postpone the case as provided in sections twenty-six and twenty-seven of this act.

(2) Any person arrested for a violation of any of the provisions of this act shall, upon demanding of the magistrate hearing the complaint against said person, produce his license for inspection, and if said person shall fail to produce his license, or to give a satisfactory excuse for its non-production, he shall, in addition to any other penalties imposed by said magistrate, be subject to a fine of not more than twenty-five dollars.

33. A summons or warrant issued by any magistrate in accordance with the provisions of this act shall be valid throughout the State, and any officer who has the power to serve the said summons, or to serve said warrant and make arrests thereon in the county where the same shall have been issued, shall have like power to serve said summons and to serve said warrant and make arrest thereon in any of the several counties of the State. If any person shall be arrested for a violation committed in the county other than that in which the arrest shall take place, the person so arrested may demand to be taken before a magistrate of the county in which the arrest may have been made for the purpose of making a cash deposit or of entering into a recognizance with sufficient surety; whereupon the officer serving the said warrant shall take the person so apprehended before a magistrate of the county in which the arrest shall have been made, who shall thereupon fix a day for the matter to be heard before the magistrate issuing the said warrant, and shall take from the person apprehended a cash deposit or recognizance to the State of New Jersey with sufficient surety or sureties for the appearance of the said person at the time and place designated in accordance with the provisions of section twenty-seven of this act; the cash deposit or recognizance so taken shall be returned to the magistrate issuing the warrant, to be retained and disposed of by him as by this act provided.

34. The same fees shall be allowed the magistrate and officers making an arrest or serving a summons in proceedings under this act as are allowed for like services in the small cause court and shall be paid by the defendant if the defendant be found guilty of the charge laid against him, but if, on appeal, said judgment be reversed, said costs shall be repaid to said defendant as hereinbefore provided. If the defendant be found not guilty of the charge or charges laid against him, then the costs must be paid by the prosecutor, except that when in such instances the commissioner of motor vehicles or the inspector of motor vehicles, shall have been prosecutor, then the costs laid upon the prosecutor shall be paid by the commissioner of motor vehicles from the moneys remaining in his hands from the payment of registration fees, license fees or otherwise. In case of the reversal of any judgment on appeal the costs of the magistrate and on appeal shall be borne and paid by the unsuccessful party.

PART IX.

Punishments and Penalties.

35. Any person who shall be convicted of violating the provisions of sections fifteen and twenty-one of this act shall be subject to a fine not exceeding one hundred dollars; in default of the payment of such fine there shall be imposed an imprisonment in the county jail for a period not exceeding ten days; provided, that any offender who shall be convicted of a second offense of the same violation may be fined in double the amount herein prescribed for the first offense, and may in default of the payment thereof, be punished by imprisonment in the county jail for a period not exceeding twenty days; provided, further, that the penalties above prescribed shall not apply to the display of a fictitious number.

Any person convicted of displaying a fictitious number as prohibited by section fifteen, or of violating the provisions of section seventeen, nineteen or twenty of this act, shall be subject to a fine not exceeding five hundred dollars, or to imprisonment in the county jail for a period not exceeding sixty days.

Any person who shall be convicted of a violation of subdivision four of section twenty-two of this act, shall be subject to a fine not exceeding two hundred and fifty dollars, or to imprisonment in the county jail for a period not exceeding thirty days.

Any person who shall be convicted of a violation of section sixteen of this act shall be subject to a fine not exceeding one hundred dollars.

Any person who shall be convicted of a violation of subdivision three of section twenty-two, or of section twenty-three of this act, shall for the first offense be subject to a fine not exceeding one hundred dollars; in default of the payment of such fine there shall be imposed an imprisonment in the county jail for a period not exceeding ten days; provided, that any offender who shall be convicted of a second or any subsequent offense of the same violation may be fined in double the amount herein prescribed for the first offense, or imprisoned in the county jail for a period not exceeding twenty days, and in addition to such penalties the license of said offender shall be revoked; provided further, that nothing herein contained shall prevent a revocation of license for the first offense, or for the violation of any other provision of this act.

Any person who shall be convicted of violating any of the following-named provisions of this act shall be subject to the penalties herein specified:

Of sections three, four or eighteen, a fine not exceeding ten dollars.

Of section six a fine not exceeding fifty dollars.

Of subdivision one of section twenty-two a fine not exceeding twenty-five dollars.

36. It shall be lawful for a magistrate before whom any hearing under this act shall be had, to revoke the license of any person to drive motor vehicles when such person shall have been guilty of such willful violation of the provisions of this act as shall in the discretion of the said magistrate justify such revocation, but an appeal of the matter to the Court of Common Pleas shall act as a stay upon said revocation, and the Court of Common Pleas upon the appeal of the said matter shall have the power to void the said revocation; and the commissioner of motor vehicles shall at all times have the power to validate a license that has been revoked, or to grant a new license to any person whose license to drive motor vehicles shall have been revoked.

It shall be lawful for the justice of the Supreme Court holding the circuit in each of the counties of this State, upon application made to him by a verified petition for that purpose by any person against whom a judgment or sentence for the violation of any of the provisions of this act shall have been rendered, who may desire to have the legality of his conviction reviewed or the reasonableness of the sentence or penalty imposed, to order the said complaint, process, proceedings, evidence and record of conviction to be forthwith brought before him, that the legality of such proceedings and sentence, or judgment, or the reasonableness of the sentence or penalty may be summarily reviewed and determined; and if such proceedings and sentence or judgment shall thereupon be found to be illegal, or the sentence or penalty be unreasonable, forthwith to set aside the same and to order the remission or reduction of any fine and costs that may have been imposed or the discharge of any offender from custody.

PART X.

Miscellaneous.

37. Moneys received in accordance with the provisions of this act, whether from fines, penalties, registration fees, license fees, or otherwise, shall be accounted for and forwarded to the Commissioner of Motor Vehicles and by him paid over to the Treasurer of the State of New Jersey, to be appropriated annually to the Commissioner of Public Roads, to be used as a fund for the repair of the improved roads throughout the State, whether they had been originally built by State aid or not, and to be by the said Commissioner, apportioned once each year among the several counties of this State according to the mileage of improved roads in each county, the share apportioned each county to be used for the repair of improved roads in that county under the direction of the Commissioner of Public Roads or his authorized representatives, and to be paid in the same manner as State funds are now paid for the improvement of public roads. The term "improved roads" as used in this section shall not include streets paved with cobble stones, Belgium block or asphalt.

38. The Commissioner of Public Roads shall be authorized and full power and authority are hereby given to him to have erected at such points throughout the State as to him shall seem necessary, cautionary warnings of dangerous crossings, steep declivities or other irregularities or perils of the roadway, at a cost, however, not to exceed in the aggregate one thousand dollars per annum.

39. When any motor vehicle shall have been deposited under this act in lieu of bond, the said motor vehicle shall be held the property of the State of New Jersey, subject to the same conditions as would govern the bond under like circumstances, and may be redeemed by the person depositing the same upon delivery of the requisite bond or upon paying such fine and subfitting to such penalty as may be imposed; and unless the motor vehicle so deposited in lieu of bond shall be redeemed within ten days next following the date of the final determination of the matter, it shall be lawful for the commissioner of motor vehicles to sell the same at public auction and apply the net proceeds of said sale (the expenses of the matter having been deducted), as set forth in section thirty-seven hereof.

40. In case for any reason any section or any provision of this act shall be questioned in any court, and shall be held to be unconstitutional or invalid, the same shall not be held to affect any other section or provision of this act.

42. Nothing in this act shall be construed to give jurisdiction to justices of the peace in any city having a police justice or recorder's court.

43. All acts and parts of acts contrary to and inconsistent herewith are hereby repealed.

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BLACK LIST POSTED AT FERRIES

Long Island Railroad Bars Automobilists for Violating Rules—Prominent Owners Under the Ban.

Failure to obey the rules of the Long Island Railroad Co. with reference to automobiles entering and leaving the ferryboats that ply across the East river between New York and Long Island City, has resulted in a black list by the company and 11 cars hereafter will be denied transportation over its ferries. The ban has been placed upon these cars because of the failure of the drivers to obey the rule which requires that the motor of a car shall be stopped after the car has been driven upon the ferry boat and shall not be started until the boat is tied fast to the slip. The ambitiousness of some chauffeurs to "crank up" when the boats are in mid-stream, so as to not lose a minute's time when the other side is reached, is what has caused the Long Island Railroad company to assert its rights.

The fact that the company has blacklisted 11 automobiles from the use of the ferries became known on Sunday, when users of the ferries were startled by the appearance of a huge blackboard over the entrance at the Long Island City terminal. The big white letters at the top of the blackboard told that "The following automobiles have been refused transportation over these ferries." Below were chalked the numbers of 11 cars, as follows:

"36,335 N. Y., 49,145 N. Y., 49,503 N. Y., 36,328 N. Y., 51,659 N. Y., 50,000 N. Y., 27,247 N. Y., 21,227 N. J., 40,422 N. Y., 36,360 N. Y., and 34,963 N. Y.

That the Long Island Railroad company does not mean to "play favorites" is evident. Among the published list of cars that have been refused transportation are those belonging to William K. Vanderbilt, Jr., William D. Sloane, Morris Untermeyer, and Alden L. McMurtry. The others are: Lawrence Gourlie, Dr. Calvin Thayer Adams, Night Setrive Co., Lozier Motor Co., Frederick H. Tucker, Jr., H. A. Pharmson, and Thomas A. Smith.

Below the blackboard flared a big sign which read:

AUTOMOBILES!
MOTOR MUST BE STOPPED
IMMEDIATELY AFTER
BEING LOCATED ON FERRY-
BOATS, AND MUST NOT BE
STARTED AGAIN UNTIL BOAT IS
FAST IN SLIP.
FAILURE TO OBSERVE
THIS RULE WILL RESULT IN
REFUSAL OF TRANSPORTATION
ON FERRIES.
LONG ISLAND R. R.

That the action taken by the Long Island Railroad Co. is not without reason cannot be denied. Though not of frequent occurrence, there have been accidents resulting from starting motors before the boats are made fast to the slip, and it is to guard against a recurrence of this that the company has found it necessary to stand upon its rights, so to speak.

In explanation of the action taken by the railroad company, President Ralph C. Peters caused this statement to be issued:

"We have been forced to take this step in the interest of public safety. Years ago a law was enacted by Congress prohibiting motor vehicles from entering upon ferries under their own power. Later that measure was changed so that vehicles driven by their own power could be propelled aboard ferries and similar boats under that power. Until that amendment was enacted they had to be pushed on board by hand. The law, however, requires that motors must be stopped immediately the vehicle is located and not started until the ferry is fast in its slip again after the trip. Chauffeurs have proved obstinate and refused to obey that law, preferring to let their engines chug away. We do not intend to stand for that any longer.

"Last fall a car on which the engine had not been stopped suddenly shot ahead and knocked three or four persons into the river. Again, there is more danger of an explosion when motors are running. Such an explosion might set fire to the ferry and cause a great loss of life. We don't wish to interfere with traffic or to put any one to inconvenience, but the law must be respected. Everybody will be treated exactly alike, but we intend to break up the practice of automobilists not stopping motors once they have their cars on board and of starting them before ferries are in the slips again."

Buffalo Enforcing "Drip Pan Ordinance."

Enforcement of the new "drip pan ordinance" began in Buffalo on Monday, 4th inst. The first offenders charged with neglecting to provide their automobiles with pans to prevent oil from dripping on the pavements got off with light penalties. There were four of them arraigned before Judge Hodson, in the Municipal Court, and all pleaded guilty, but averred in extenuation of their offense that they had ordered pans which had not been delivered at the time. The court mulcted each defendant only the amount of costs, $1.50 for each, but intimated that the cases would not constitute precedents.

Bullets for the Tires of Scorchers.

Chief of Police Metzger, of Indianapolis, is on the war path. He has instructed Motorcycle Patrolman Gibney to use his revolver on the tires of any automobiles whose drivers refuse to stop when ordered. Metzger has announced that he will make every effort to have second offenders fined the limit of $200 and costs.

SIGNS THAT "GO BY CONTRARIES"

Some in Somerville that Don't Say What They Mean, nor Mean What They Say.

Somerville is one of several cities, considerable in size, that cluster around Boston, constituting the fellies of the big metropolitan "wheel" of which Boston is the "Hub." It has many miles of good streets, with such a variety of stiff hills and long level stretches as to lead speed loving motorists into temptation. Among its residents is C. A. Kenniston, who has a storehouse at 174 Walnut street. In front of it he has a huge sign that motorists cannot fail to see, no matter how fast they may be moting from the Mystic boulevard across Broadway and up the Walnut street hill, one of the stiffest in the city, by the way, and a good one for the climber. The sign bears the legend:

AUTO RACING
EVERY DAY
RIGHT BY HERE
MILE
A MINNIT
GRAND OLD STAND

"People here in America, and especially automobilists, do just the opposite of what they are told," Kenniston explained to a curious caller, who had noticed the size of the sign and the excellent work in the big black lettering. "They don't mind the signs on the boulevard telling them the speed limit is 15 miles an hour. They go by here a mile a m-i-n-u-t-e-, not a 'minnit' as my sign says. And, by gosh, that's dangerous.

"With all the automobilists here, it's getting as bad as down Maine. I don't dare let my daughter go out driving alone. Down Maine the farmers don't dare let their wives and daughters go down to the village store alone for fear of these automobilists; why, with their big goggle lamps they'd scare any one to death on a dark night."

And so Mr. Kenniston puts up a sign telling of the beauties of his place of business as a grandstand for witnessing the automobile racing. He hopes the drivers will do just the opposite of what the sign suggests.

Kenniston is a believer in signs. He has them all around his storehouse and yard. The most of them warn people to do just what Kenniston doesn't want them to do.

One of Kenniston's signs, for example, reads:

"Hit it and pull it down, as Samson did the temple."

Despite the fact that every driver of a wagon sees the sign in large letters, the pillar on which the suggestion is thus plainly set forth has not been hit once, even softly.

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Elegance and Efficiency



Oakland Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail light, generator, horn, tools, jack, pump and batteries. Top, $75.00 extra.

Note the straight-line Body—the hall-mark of Quality.

MATHEMATICALLY EXACT

The Oakland car, in its completeness, in an assemblage of parts, every one of which has been studied and worked out in detail, the result being a matter of mathematical certainty.

There were no theories to advance, no experiments to be proved. Engineering skill and extended automobile experience were united to produce the simplest, most efficient and economical motor car possible. Price was not considered, for elimination of costly complexity and a proper understanding of the object in mind regulated that consideration.

Maximum of Power; Minimum of Parts

The Oakland car was designed to realize to the fullest extent the possibilities of the gasolene motor in its simplest and most economical form. This includes first cost, cost of maintenance, operation and long life. We honestly believe the Oakland will stand more hard, legitimate abuse with less attention than any other automobile, regardless of price.

Simplicity of Construction

The power plant is a two-cylinder vertical engine, perfectly balanced, absolutely free from vibration, water cooled by the thermo-syphon, or gravity system (doing away with all gears, pumps, etc.), a transmission that the planetary system ought to be, but isn't, shaft drive with all bearings of more generous surface than provided for in most larger cars, and delivers TWENTY HORSEPOWER AT THE DRIVING WHEELS. Lubrication is positive and unfailing. Engine design insures perfect ignition. Carburetion is constant at all speeds. Semi-elliptic front and full elliptic rear springs provide luxurious riding qualities.

The Oakland is making friends by "making good."

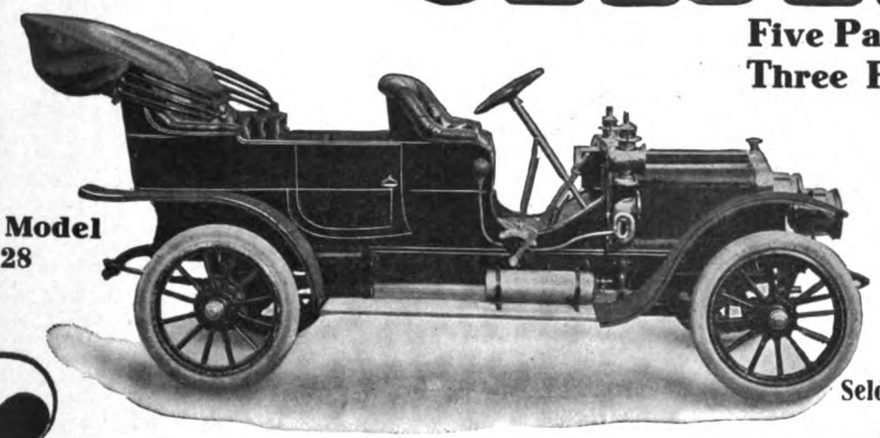
Runabout, $1300 Tourabout, $1350 Touring Car, $1350

Oakland agents are already making money. Would you be one of them? Act NOW.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

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THE SELDEN CAR



Model 28

Five Passenger Touring Car $2000
Three Passenger Runabout $2000

AN ATTRACTIVE CAR AT AN ATTRACTIVE PRICE

SPECIFICATIONS—Engine, 4 cylinders, 4¼x4½, 28-30 brake horsepower. Transmission, 3 speeds forward and reverse, selective, Timken bearings. Wheel base, 109 inches; tread, standard; clutch, cone leather. Body, sheet metal, straight line type, roomy and comfortable. Tires, 32x3½, quick detachable; make optional. Frame, pressed steel, 4¾ inches deep. Front axle, single I-beam drop forging, ball bearings. Rear axle, bevel gear drive, enclosed type, roller bearings. Ignition, synchronized jump spark. Weight, empty, 2,200 lbs. (actual, not catalogue).

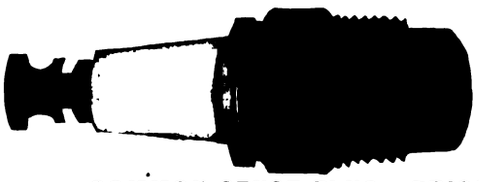
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Agencies Wanted in Unoccupied Territory.

THERMOID Brake Lining

POSITIVELY WILL NOT BURN—GRIPS INSTANTLY—LASTS INDEFINITELY

Write for Particulars **TRENTON RUBBER MFG. CO.,** **2900 State Street, TRENTON, N. J.**



The Proof of the Pudding is in the Eating

COMMON SENSE PLUG. PRICE $1.25

It is very easy for you to prove whether the claims for excellence of **SPLITDORF IGNITION APPARATUS** are real or whether they are mere talk.

Just give it a fair trial on your car—that's all.

You will soon discover an absence of ignition troubles and a reliability and efficiency that will make you its friend.

C. F. SPLITDORF, Walton Ave. & 138th St., Branch, 1679 Broadway **NEW YORK**



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG—DURABLE
SCALELESS—RUSTLESS
SMOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

Empire Tires
WEAR LONGEST

EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 20 La Salle St.; Atlanta, Ga, Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo.; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

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The Week's Patents.

12,754. Reissue. Tire Cover. William A. Allen, New York, N. Y. Filed Jan. 17, 1908. Serial No. 411,375. Original No. 828,701, dated Aug. 14, 1906, Serial No. 298,880.

1. A covering for vehicle tires, constructed of a weather proof material consisting of connected substantially parallel strips, one for the inner face of the tire, one for each of the side faces of the same, one for the tread, and a flap connected with the inner facing strip, and adapted for lapping engagement with one of the side strips, one only of the parts thus lapped being transversely divided, and one portion of the flap being arranged to extend beneath said side strip and the other portion outside said side strip, and means for securing the flap to the side strip with which it engages.

880,526. Vehicle. Henry S. Hele-Shaw, London, England. Filed June 27, 1907. Serial No. 381,161.

1. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane," feet supported by said carrier and movable relatively to the carrier to engage the ground and to raise them clear of the ground.

880,587. Apparatus for Manufacturing Pneumatic Tires. Thomas Sloper, Devizes, England. Filed June 27, 1907. Serial No. 381,164.

1. In a "former" employed in building up a tire fabric, means for holding a plurality of anchoring devices for the fabric, in such a manner that they may be released from the "former" without disturbing their relation to the fabric, substantially as set forth.

880,664. Friction Clutch. William J. Hilliard, Elmira, N. Y. Filed Jan. 15, 1907. Serial No. 352,418.

1. The combination in a friction clutch, of a clutch member, a friction surface thereon, a longitudinally movable section on said second clutch member, a friction surface thereon, screw mechanism for moving said sections of the second member toward and away from the friction surface on the first named clutch member, and a sleeve rotatable with the shaft and non-rotatable with relation to the screw mechanism for operating said screw mechanism, substantially as set forth.

880,704. Gas Engine. Marshall L. Wood, Montpelier, Vt. Filed Feb. 5, 1907. Serial No. 355,782.

1. In an internal combustion or explosive engine, the combination of a plurality of cylinders, and a piston in each cylinder which supplies the fuel-charge to another of said cylinders, said piston having a hollow interior in which the fuel-charge is received and compressed.

880,732. Driving Mechanism. Edmund R. Halsey, South Orange, N. J. Filed Feb. 16, 1907. Serial No. 357,702.

1. In a friction drive, the combination, with an axle which is to be driven, of a friction device connected with said axle, a driving shaft, a transmission shaft operated from said driving shaft, a friction disc at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disc of said shaft in engagement with the friction device of the axle, and mechanism for producing a lateral reciprocatory movement of the transmission shaft, comprising a channeled truss or guide bar, a slide upon said bar, a bearing on said slide in which said transmission shaft is revolubly arranged, and means for moving said slide back and forth upon said guide bar, substantially as and for the purposes set forth.

880,739. Automobile. Manander M. Johnson, Clay Center, Neb. Filed Nov. 30, 1907. Serial No. 404,603.

1. In automobile construction, the combination of running gear, an air receiver supported thereon and having an open end arranged toward the front end of the machine, a motor, means for conveying air from the air receiver to different parts of the motor, and means for variably controling the relative quantities of air passing to said parts.

880,759. Motor Vehicle. George G. Schroeder, Washington, D. C., assignor to Farm Motor Company, a Corporation of South Dakota. Filed June 20, 1906. Serial No. 322,563.

1. A motor vehicle comprising a body provided with traction wheels, an independent drive shaft for each wheel, gearing for imparting forward and reverse rotations to each drive shaft and each adapted to independently connect its respective shaft with either of its respective gearings.

880,815. Stored Pressure Motor Starting Device. Edward P. Noyes, Winchester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Dec. 28, 1906. Serial No. 349,822.

1. In a compound motor system, the combination of a high presure internal combustion prime motor adapted to drive the external load indirectly through the medium of exhaust pressure fluid, an independently running low pressure engine operated by the pressure of the exhaust from said prime motor, means for storing the pressure fluid suplied by said prime motor and for admitting it to the low pressure engine, and means for temporarily connecting the low pressure engine to drive the prime motor.

880,856. Reversible and Variable Speed Power Transmitting Device. Joseph Bartosik and Peter Krummel, Pittsburg, Pa. Filed May 17, 1906. Serial No. 317,283.

1. In combination aligning shafts, discs on the adjacent ends of the shafts, the opposed faces of the discs being conical, a drive shaft passing between the discs, friction rolls on the drive shaft movable on the shaft, a frame movable on each of the rolls, a bar secured to each frame and slidable through the remaining frame, and means engaging the bars to impart movement thereto.

880,884. Spring for Vehicles. Leverett C. Haynes, Boston, Mass. Filed Oct. 3, 1906. Serial No. 337,308.

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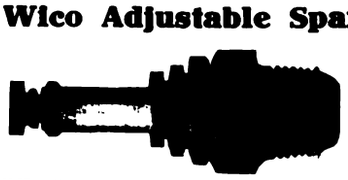


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880,923. Non-Puncturable Inner Tire. Baldwin F. Schirmer, Indianapolis, Ind. Filed Nov. 6, 1905. Serial No. 286,025.

1. The combination with the rim and tubular tire, of an anular chamber adjacent to the rim, a series of cylinders housed within the tubular tire and communicating with said chamber, a piston in each chamber, and a shoe pivoted upon each piston and adapted to engage the inner surface of the tubular tire, substantially as described.

880,953. Traction Vehicle. Robert E. Zager, Branscombe, Cal. Filed May 10, 1907. Serial No. 372,894.

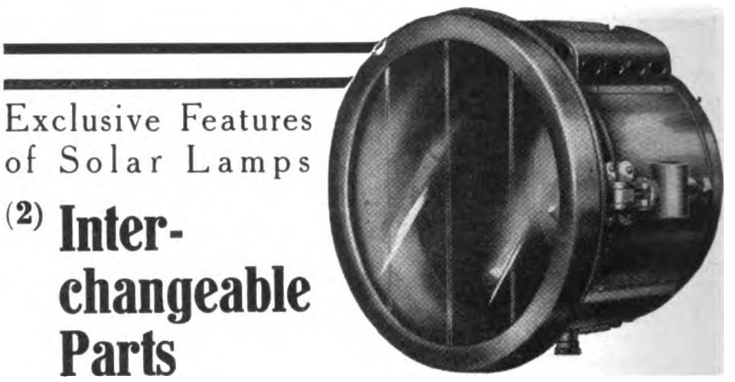
1. In a traction vehicle, a main frame, a king pin revolubly connected thereto, a truck frame swiveled on said king pin and supporting said main frame, traction wheels journaled to said truck frame and having swiveled connection therewith, means for swiveling said wheels with respect to said truck frame, a prime mover on said main frame, a power shaft journaled in said main frame and adapted to be driven by said prime mover; transmission mechanism connected with said power shaft for driving said king pin, means for starting, stopping and reversing the rotation of said king pin to said traction wheels.

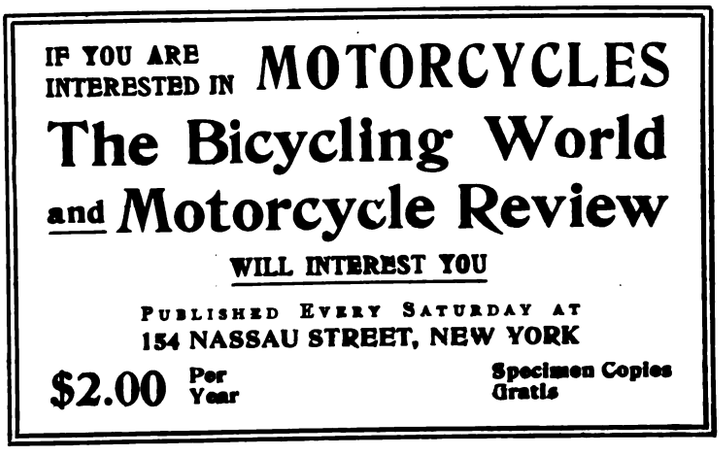
881,008. Truck. Sargeant P. Knut, Washington, D. C. Filed Sept. 4, 1907. Serial No. 391,283.

1. The combination, with a motor car having tires, of a vehicle arranged to receive said car and provided with propelling means, and means independent of the motor car tires to gear the motor to the propelling means.









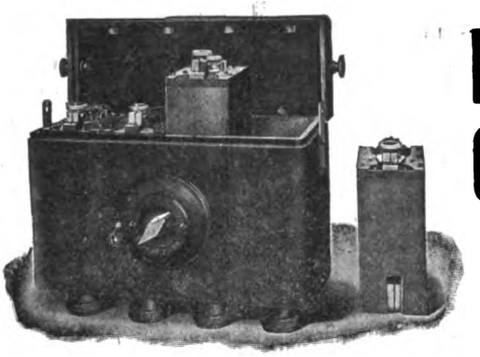
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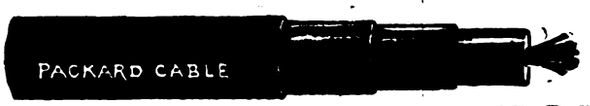
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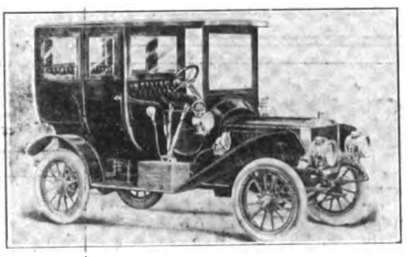
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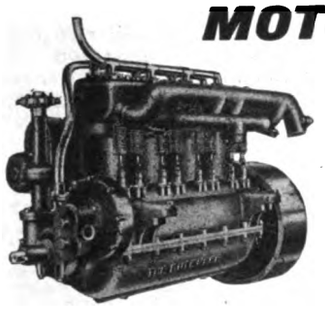
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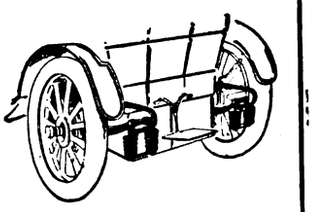
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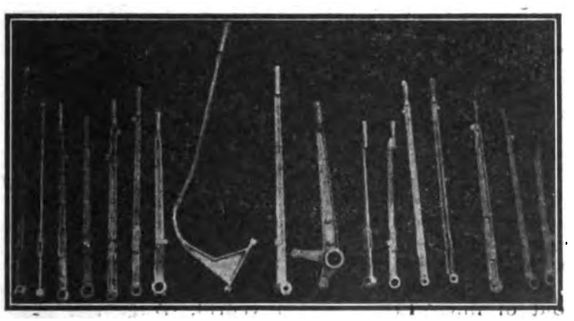
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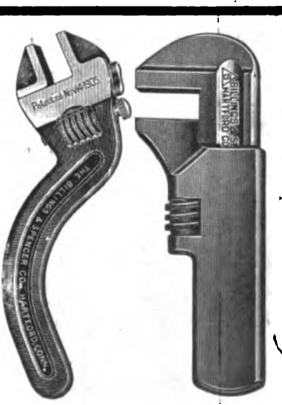
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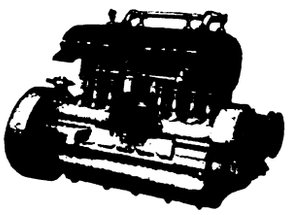
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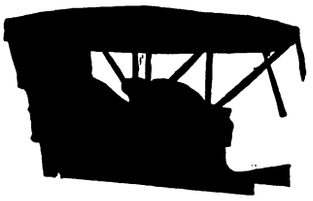
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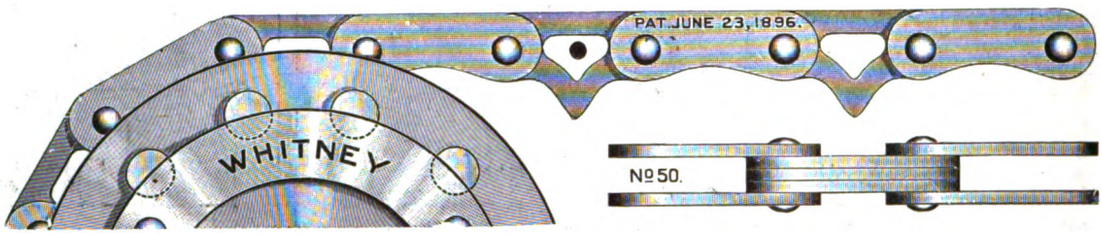
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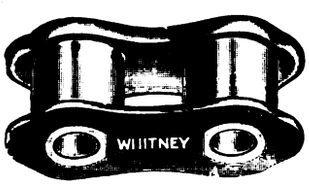

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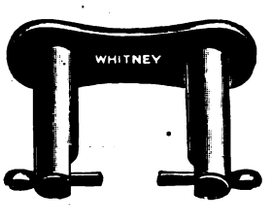

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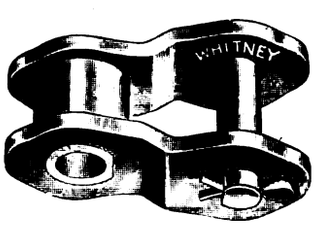


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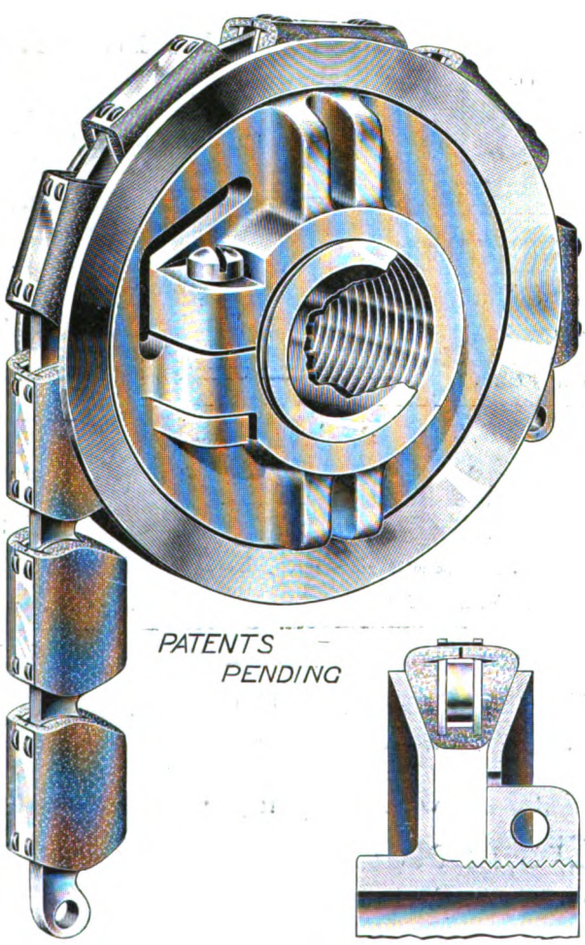


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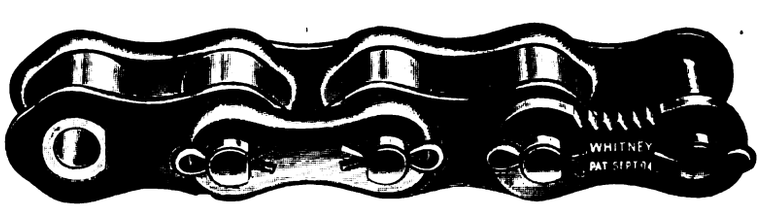

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¶The Special B & L Solar short focus Mangin Mirrors are made for us exclusively by Bausch & Lomb. These Mangin Mirror Reflectors assure increased illumination, and are better both optically and mechanically than any other reflector. The perfect method of annealing reduces the danger of breakage to a minimum. ¶The practical way of mounting, and the accurate method of adjustment provided for focusing make it possible to obtain the highest efficiency from the combination lens mirror and front reflector. ¶This important detail and all others explained fully in our new 1908 catalogue. Write for copy.

BADGER BRASS MANUFACTURING CO.
Two Factories:
KENOSHA, WIS.
436 11th Avenue
NEW YORK

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TRADE MARK

"The tire with the doubt and the risk left out"



¶ We sincerely believe that Hartford are the best tires made in the world. We know for a certainty that none are better for the very good reason that we put the best and only the best material into them; that we employ only the best workmen.

¶ But, after all, the strongest and best argument we can present is the tires themselves and the matchless and unparallelled record they have made the past year in touring, track, hill climbing and endurance contests.

¶ We propose to make the merits of Hartford Tires thoroughly known to consumers by national advertising. This advertising is a real asset to manufacturers who use Hartford Tires and a real asset to those who specify and sell Hartford Tires.

¶ Another big feature in favor of doing your tire business with us is the very complete line we make and carry constantly in stock at the factory and at any one of our branches located conveniently throughout the country.

¶ We make Clinchers—Dunlops, plain and with the Hartford Non-Skid Midgley Tread, Midgley Universal Rims and the New Hartford Quick Detachable Clincher. Our Clincher Tires are made also in Millimeter sizes.

¶ Get our complete tire catalogue.

THE HARTFORD RUBBER WORKS CO. HARTFORD CONNECTICUT

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 156 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber & Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Salt Lake Hardware Co., Salt Lake City; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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WHITE WINS

Double Victory in Harrisburg Endurance Run

A 30 horse-power White Steamer was the only touring car to make a perfect score in the 320-mile endurance run of the Motor Club of Harrisburg, held May 4 and 5. The White was awarded the principal trophy, the Board of Trade Cup, and also the *Patriot* Cup for which four cars, including the White, tied in last year's contest. Three of last year's successful drivers competed with the same makes of cars in this year's contest and their relative performances decided the award of the 1907 trophy, the White, of course, being the winner.

The contest was run over the rough and hilly roads of eastern Pennsylvania. A 20-mile-an-hour schedule prevailed, with checking stations at intervals of approximately 30 miles. Each car carried an observer, and, in addition, all working parts were sealed. At the conclusion of the run the cars were critically examined by a committee of well known experts.

That the single White entry should have made the only perfect score in the touring car division is significant of the superior reliability and strength of construction of the White. The results of the Harrisburg contest, it should be further pointed out, were the same as in the memorable contest of the Quaker City Motor Club on January 1, 2 and 5, and in last year's struggle for the Hower Trophy, in that the single White entry proved triumphant over a large number of the leading gasolene cars.

NEW SAN FRANCISCO-LOS ANGELES RECORD

A 30 horse-power White Steamer set up a new record from San Francisco to Los Angeles on April 28, 1908, covering the 478-mile mountainous journey in 17 hours and 17 minutes, thus cutting 56 minutes from the former record which had stood for nearly two years.

PERFECT SCORE IN DETROIT ENDURANCE RUN

The single White Steamer entered in the three-day, 419-mile endurance run of the Detroit Dealers' Association, held on April 29-30 and May 1, made the usual White performance—a perfect score.

PERFECT SCORE IN BALTIMORE "SEALED MECHANISM" CONTEST

The single White Steamer entered in the 147-mile "sealed mechanism" contest of the Automobile Club of Maryland, held May 2, made the usual White performance—a perfect score.

Call and see the car in a class by itself

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St.
San Francisco, 1460 Market St.
Philadelphia, 629-33 N. Broad St.
Boston, 320 Newbury St.
Chicago, 240 Michigan Ave.
Cleveland, 407 Rockwell Ave.
Pittsburg, 138-148 Beatty Street.

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Here's a Record Breaker!

DURING the months of January, February, March and April, 1908, one dealer in the middle west sold Rambler automobiles to the value of $127,325.93.

There is a big opportunity for substantial business men to add greatly to the volume of their business by selling Rambler automobiles.

More business of all kinds is being done in the middle and southwest to-day than in any other section.

Right now St. Louis, perhaps the choicest location of all, is open for the sale of Rambler automobiles.

The Rambler sales agency proposition is reciprocal and is bound to interest any wideawake business man.

Write for particulars now.

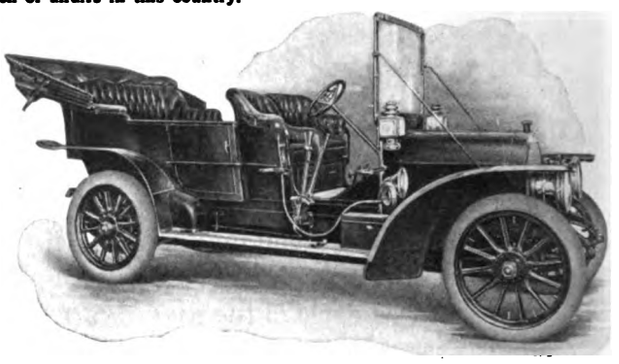
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Main Office and Factory : KENOSHA, WISCONSIN

Matheson

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Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



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Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

Garford

The Morris Park 24-hour race last September was a real test of the cars. The track became torn up and rutted and muddy, and the speed maintained by leading contestants was high throughout.

A car on a **Garford chassis** beat every other entry but one. There was not one hour when the speed was less that 40 or over 46 miles an hour, on the crowded, oval, roughened track. **And**

The Garford went the 24 hours without **any** adjustment—without so much as a monkey wrench touching a nut.

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1540 Broadway, New York City.

Western Inquiries
Garford Motor Car Co. of Cleveland,
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WRAPPED TREAD TIRES

GUARANTEED FOR 5,000 MILES RIDING

Write for a copy of that Guarantee, stating size tire you are using.

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AJAX-GRIEB RUBBER CO.

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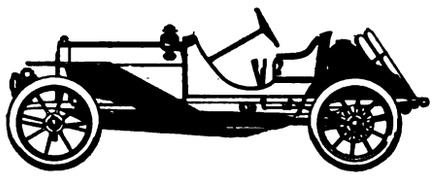
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No. 14 **Palmer-Singer Six-Sixty. 6 Cylinder, 60 H. P. $2,850**

Palmer-Singer Four-Thirty 4 Cylinder, 30 H. P. $1,950

All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Passenger Touring Car 40 H. P. $4,000



Palmer-Singer Town and Country Car 22-30 H. P. $3,000

Palmer and Singer Six-Fifty Racing Car 6 Cylinders, 50 H.P. $2,450

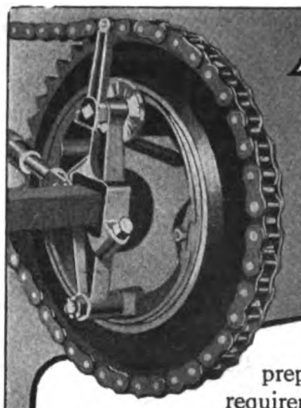
The Six-Fifty is a gentleman's racing car—the fastest thing on the road—the snappiest thing on the market. It has all the appearance, the speed, the endurance of a Vanderbilt Cup racer and will be tremendously popular.

Metropolitan Distributors the SELDEN

Palmer & Singer Mfg. Co.

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Sole Distributors the SIMPLEX



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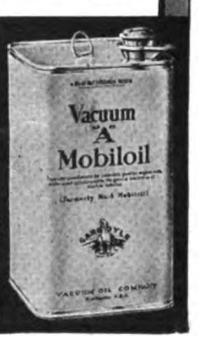
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is the only perfect automobile lubricant. Sold everywhere in barrels and cans of varying capacities.

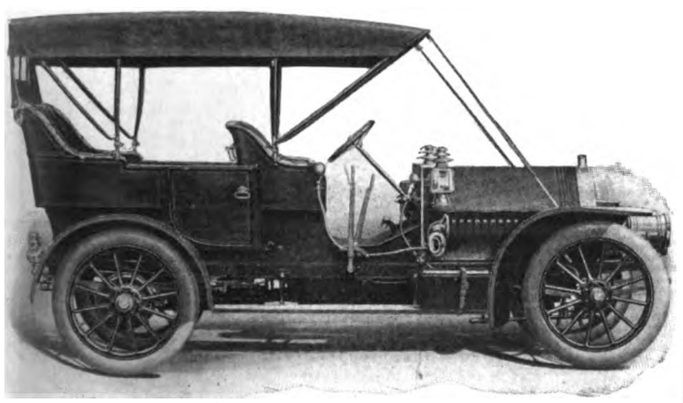
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THE "JEWEL 40"

THE "NON-SKIDDING" CAR



Compare following specifications with other cars at $3,000.

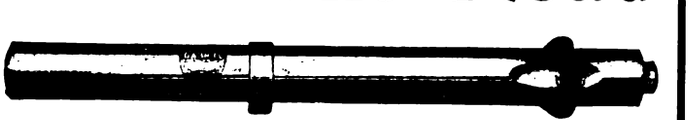
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Write for catalogue. Good proposition for dealers.

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Clear The Road



The Gabriel Horn warns without frightening—its clear, far-reaching musical tone can be heard half a mile away.

Operated by foot-lever—no bulbs or reeds to get out of order.

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H. M. Emperor of Germany..... 8 horns
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The Gabriel Horn, Cut-Out Valve and Shock Absorbers can be attached to any make or model of car.



Write to-day for booklet and prices.

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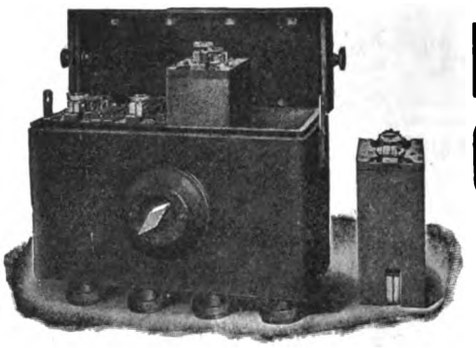
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In center of Theatre, Shopping and Business district.
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EVERY ROOM WITH BATH
Rates $1.50 per Day up.
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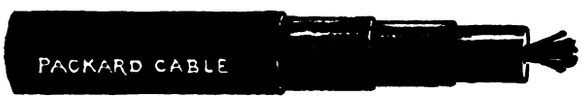
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Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF.

Samples and Prices on Request.

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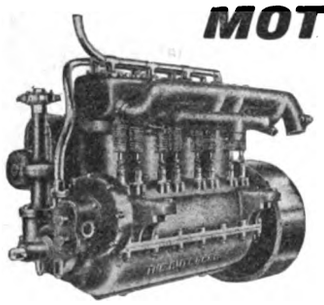
For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

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SCALELESS—RUSTLESS
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A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

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Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

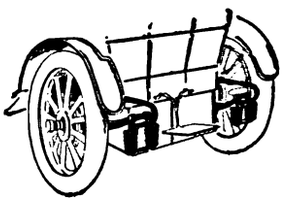


A NEW SENSATION

Equip your car with

Supplementary Spiral Springs

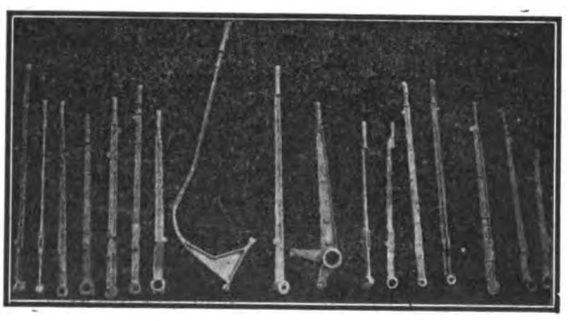
and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.



Supplementary Spiral Spring Co.
4555 Delmar Ave., St. Louis

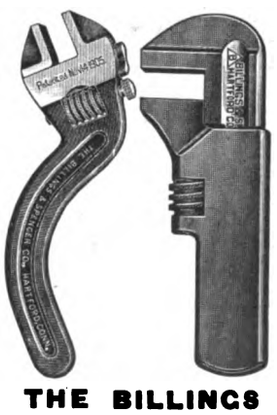
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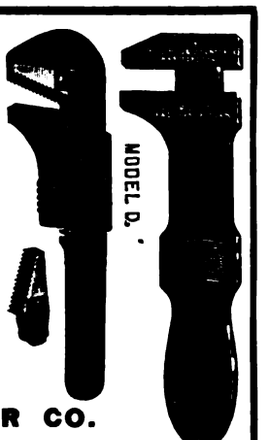


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THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.



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THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller ..... $1.00 per foot.
1 x ⅝ x ⅝ roller ..... 1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller ..... 1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. **Price 60 cents per bottle.**

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. **The list price of the Miller Jack, $3.50 each.**



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Manufacturer, Jobber, Exporter and Importer

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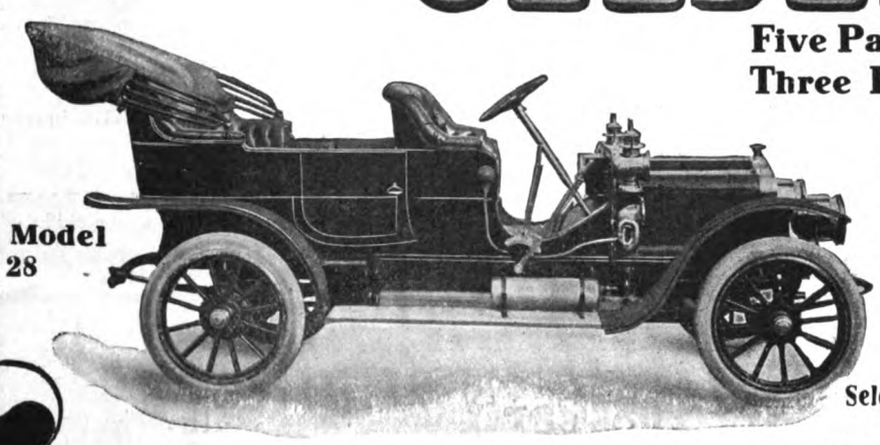
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Empire Tires
WEAR LONGEST

EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

THE SELDEN CAR



Model 28

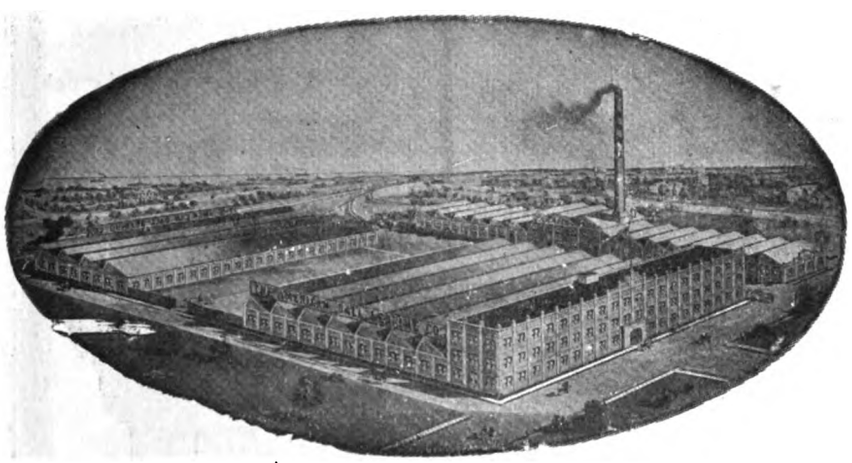
Five Passenger Touring Car $2000
Three Passenger Runabout $2000

AN ATTRACTIVE CAR AT AN ATTRACTIVE PRICE

SPECIFICATIONS—Engine, 4 cylinders, 4¼x4½, 28-30 brake horsepower. Transmission, 3 speeds forward and reverse, selective, Timken bearings. Wheel base, 109 inches; tread, standard; clutch, cone leather. Body, sheet metal, straight line type, roomy and comfortable. Tires, 32x3½, quick detachable; make optional. Frame, pressed steel, 4¼ inches deep. Front axle, single I-beam drop forging, ball bearings. Rear axle, bevel gear drive, enclosed type, roller bearings. Ignition, synchronized jump spark. Weight, empty, 2,200 lbs. (actual, not catalogue).

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THE PALMER & SINGER MFG. CO.,
1620 Broadway

Selden Motor Vehicle Company, Rochester, N.Y.
Members A. L. A. M.
Agencies Wanted in Unoccupied Territory.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park

CLEVELAND, OHIO, U.S.A.

COMPLETE COURSE
AUTOMOBILE INSTRUCTION
Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the
Correspondence School of Motor Car Practice
Tarrytown, N. Y.

FRANKLIN
Automobiles

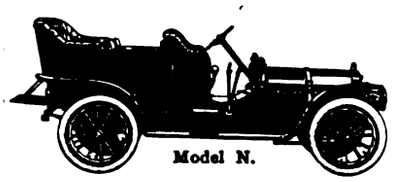
The cost of a motor car is different from the price. Write for catalogue which explains Franklin high-power at low cost.
H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

STEWART SPEEDOMETERS
OUTGLASS ALL OTHERS
Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model $40. American $25.
Guaranteed Absolutely for Five Years.
STEWART & CLARK MFG. CO.,
509 Diversey Boulevard, Chicago, U. S. A.

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National Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.


Model N.

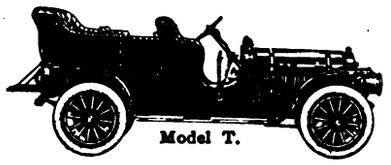
Model K - 4 cyl., 4⅞ x 5
$3,500

Model N — 4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x 4¾
$4,200

Model T — 6 cyl., 5 x 5
$5,000


Model T.

Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.
1007 E. 22d Street INDIANAPOLIS, IND.

The Auto-Meter Is Believed

Every big motor event that has taken place in the past three or four years has seen more Auto-Meters in evidence than all other makes of speed indicators combined.

In the Glidden Tours the number of Auto-Meters used by contestants doubled and tripled all other makes put together.

In the New York-Paris Race the only speed indicator is a Warner on the Thomas car.

Nearly all the automobile manufacturers of the country use the Warner to test out their cars before they leave the factory.

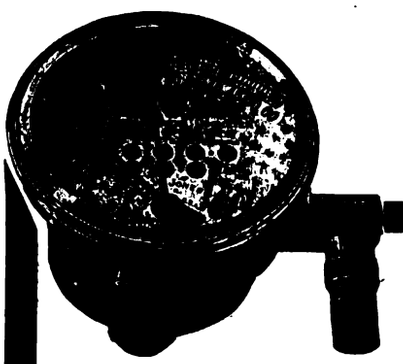


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does not have to be sold with a written guarantee. The fact that a speed indicator bears the name "Jones" is a sufficient guarantee of its accuracy and efficiency. The "Jones" does not have to be "demonstrated" or placed on thirty day trial. It is sold ON ITS MERITS —and on its reputation as the the best speed indicator built —nothing else. It is backed by eight years of actual performance, eight years of constant accuracy, eight years of unfailing reliability.

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259 North Broad Street
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Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any $4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

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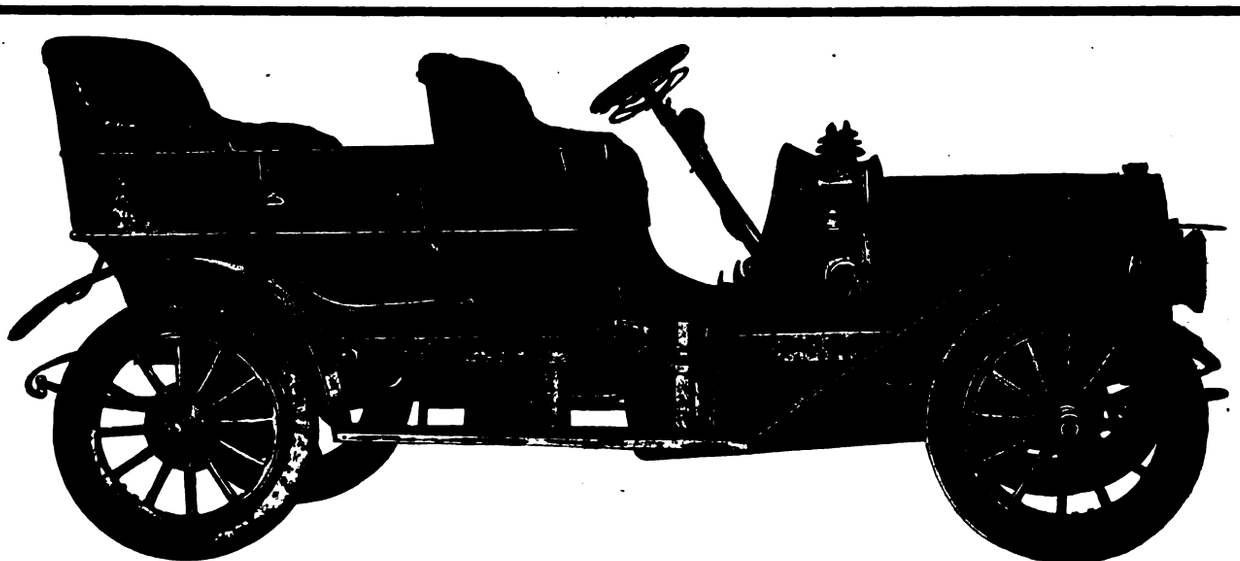
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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, May 14, 1908. No. 7

CHICAGO MAY HAVE TWO SHOWS

Proposition for "Independent" Exhibition Interests Local Automobile Club—Two Locations Available.

Chicago is in a fair way to have two shows instead of one next winter. General Manager Alfred Reeves of the A. M. C. M. A., made overtures to the Chicago Automobile Club in regard to the matter of an "independent" show and the board of managers officially responded, by letter dated May 8, to the effect that "Barkis is willin'" to receive further advances. Simultaneously, men in Chicago who are interested in the direction of giving the Windy City a show that will appeal to others than the Selden group of makers began to hunt for a suitable building for the show, keeping always in mind the adaptability of the Dexter Park Pavilion at the stockyards. They have discovered that the new Seventh Regiment armory on Wentworth avenue near Thirty-third street is an ideal structure for the show and doubtless will try to get an option on the building for the latter part of next January.

The regiment's new home is well under way and will be completed in plenty of time for the automobile show. It is admirably located and easily accessible by electric cars, the elevated railroad and the steam roads. There will be two large drill floors that will not only facilitate the aesthetic installation of machines, but afford a wide scope for decorative effect.

Sternbergh Wins on Appeal.

After sustaining two defeats, Herbert M. Sternbergh, formerly president of the Duryea Power Co., Reading. Pa., finally has obtained a reversal of judgment in the hard fought case which followed the appointment of a receiver for that company. When the company reached the bankruptcy court, Sternbergh presented claims for $14,000 for money advanced and sought to vote his claims in the election of a trustee. In opposition it was contended that Sternbergh was really a debtor to the extent of $25,000 for unpaid stock subscriptions, and therefore was not entitled to a vote. The referee sustained this argument and in turn was upheld by the court. Sternbergh appealed and this appeal has been decided in his favor by Judge Buffington, sitting in the United States Circuit Court for the Pennsylvania district. The effect of this decision will permit Sternbergh to participate in the distribution of the assets of the estate upon the basis of his claim, but will not disturb the trusteeship, which was not attacked in the appeal, as the estate is now practically wound up, the plants and assets having been sold; also he will not be compelled to face a suit by the trustee for the unpaid stock subscription which was held in abeyance pending the decision of the appeal.

R. Hale Smith Takes His Own Life.

R. Hale Smith, president and treasurer of the R. H. Smith Mfg. Co., Springfield, Mass., makers of the Springfield Motometer, committed suicide by shooting himself in the right temple on Tuesday night last, 12th inst. He was found unconscious by his brother shortly before 10 o'clock and expired an hour later. He had shot himself while seated at his desk in his office, after first telephoning his brother and a doctor requesting that they come at once because of "something important," and sending a note to his wife. To ill health and brooding over business worries are ascribed the cause of Mr. Smith's action. He was 63 years of age and a man of much prominence in Springfield, being, among other things, chairman of the Board of Public Works.

To Sell the Sager Productions.

The Motor Distribution Co., of New York City, which was incorporated this week with a capital of $25,000, has taken the selling agency for Sager equalizing springs, cross chains and protection bumpers manufactured by the J. H. Sager Co., Rochester, N. Y.

MORRIS FINED $100 FOR CONTEMPT

Manhattan Storage Man Violates Injunction and Rushmore Hales Him to Court—Morris Blames Clerks.

Having obtained injunctions against the Manhattan Storage Co., the Manhattan Lamp Works, the General Automobile Supply Co., and the Manhattan Screw & Stamping Co., among others, restraining each and all of them from manufacturing or in any way dealing with "colorable imitations" of the Rushmore flarefront design, the Rushmore Dynamo Co. has been unusually active in pressing home their advantage.

Despite the injunctions, it is alleged that several of the defendants have continued to make or sell lamps of the sort and accordingly Rushmore had them cited for contempt of court.

The first of these cases to be tried involved Adolph Morris, of the firm of Morris & Grinberg, who do business as the Manhattan Storage Co. It was heard yesterday by Judge Hough, in the United States Circuit Court in New York, and resulted in a fine of $100 being imposed on Morris. According to the evidence, Grinberg had escaped legal service. The marshal had been unable to locate him and Morris's lawyer stated that Grinberg "never goes to the Broadway store, being engaged in a manufacturing business in another part of the city."

Morris, who appears to have been "caught with the goods" admitted his guilt and made efforts to settle the case out of court. Rushmore himself had played the part of Sherlock Holmes, and calling at the Manhattan Storage Co.'s establishment had induced one of the salesmen to fit one of the infringing lamps to his automobile while a photographer in waiting took a picture of him while in the act. The court ruled however. that the photograph was not material proof.

Morris practically threw himself on the

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mercy of the court. He pleaded that a serious accident to his three daughters had caused him to absent himself from his store for three weeks, and generally threw the blame on his clerks who manfully substantiated his every statement. Morris, they said, had given them strict orders to put the offending lamps in the cellar and not to sell or display them in any way. The fitting of one of the lamps to Rushmore's automobile was explained with exquisite gracefulness. The lamp "just happened" to be reposing on a shelf when Rushmore called, and it was solely to oblige a prospective customer that the salesman took it out of doors and attached it to his car that he might see "just how it looked," and not for the purpose of effecting a sale. It it had not been for the overzealousness of this clerk, there would have been no contempt, Morris's lawyer maintained. He thought a $10 fine would amply cover any contempt that had been shown. Rushmore's lawyer had not a great deal to say, while his opponent played so hard on the harp of human sympathy that Judge Hough at one stage of the proceedings, asked Rushmore's counsel: "Why are you so bloodthirsty?" the judge expressing the belief that "if an order of this court goes out branding this defendant as in contempt, it will affect him in his business relations." Earlier, however, the court declared himself less mercifully.

"I decline to believe," he then said, "that if strong and emphatic orders had been given to the clerks by Mr. Morris that the injunction would have been violated."

Trinidad a Good Possible Market.

According to the Canadian commercial agent at Port of Spain, Trinidad, an opening for motor cars exists in those islands. "This country is especially adapted for motor cars," he states, "having excellent roads for hundreds of miles. Very few cars have been imported, and those only by people who have been abroad and selected for themselves. The number of persons here who are in a position to drive their own vehicles is comparatively large, and if a handy, reliable, and fairly cheap machine were introduced there would be, I think, a good market for them, and the first one on the spot will get the advantage."

Mason to Make Addition to Factory.

With capital stock increased from $50,000 to $100,000, the Mason Motor Car Co., of Des Moines, Iowa, plans the building this summer of an extension to its plant. The addition will be 44x150 feet, and will house the painting, upholstering and assembling departments.

Elkhart Building a Cement Factory.

Work has been commenced on a two-story cement factory at Elkhart, Ind., for the Elkhart Motor Car Co. The building will be 40 by 120 feet and is expected to be completed in about 60 days.

The Week's Incorporations.

Norwalk, O.—New London & Norwalk Transportation Co., under Ohio laws, to establish an automobile passenger and freight service.

Jamaica, N. Y.—Jamaica Motor Car Co., under New York laws, with $1,000 capital. Corporators—J. A. Jones, John Leonardi, F. B. Anderson.

Chicago, Ill.—American Puncture Proof Tire Co., under Illinois laws, with $60,000 capital. Corporators—G. E. Divon, J. L. G. Dykes, H. S. Osborne.

Allenhurst, N. J.—Atlantic Coast Garage, under New Jersey laws, with $125,000 capital. Corporators—W. F. Weed, J. F. Padelford, J. D. Brockway.

Camden, N. J.—Pennsylvania Taximeter Cab Co., under New Jersey laws, with $50,000 capital. Corporators—J. C. Hinckle, W. C. Wilson, H. H. Voorhees, Camden, N. J.

Jersey City, N. J.—Taxi Motor Car Co. of Philadelphia, under New Jersey laws, with $300,000 capital. Corporators— C. A. Cole, Hackensack; R. F. Tully, F. Vreeland, Jersey City, N. J.

Buffalo, N. Y.—Buffalo Sightseeing Co., under New York laws, with $15,000 capital; to operate sightseeing automobiles. Corporators—Gibson Howard, Fred J. Weber, Henry G. Breed, Jr.

Camden, N. J.—Autobus Co., The, under New Jersey laws, with $1,000,000 capital; automobiles, vehicles, motor cars, etc. Corporators—F. R. Hansell, W. F. Eidell, J. A. MacPeak, Camden, N. J.

Jersey City, N. J.—Sterling Vehicle Co., under New Jersey laws, with $300,000 capital; to manufacture automobiles, motor boats, etc. Corporators—H. O. Coughlin, B. S. Mantz, L. H. Gunther, Jersey City, N. J.

Hoboken, N. J.—International Generator Co., under New Jersey laws, with $100,000 capital; to manufacture engines, automobiles and motor boats. Corporators—J. E. Whiting, Willard P. Jessup, Frank C. Pringle.

New York City, N. Y.—American Zust Motor Co., under New York laws, with $50,000 capital. Corporators—Walter F. Sykes and Walter F. Sykes, Jr., 85 Water street; L. Lawrence Weber, 1402 Broadway, New York City, N. Y.

Asbury Park, N. J.—Zacharias Garage Co., under New Jersey laws, with $100,000 capital; to manufacture automobile vehicles and electric and other motors. Corporators—C. R. Zacharias, L. Hulit, Asbury Park; F. L. C. Martin, Plainfield, N. J.

New York City, N. Y.—Motor Distribution Co., under New York laws, with $25,000 capital. Corporators—Bennett Bishop, 54 West Fifty-fifth street; John F. Meader, 536 West 112th street; Edgar B. Bronson, 194 Riverside Drive, New York City, N. Y.

New York City, N. Y.—S. Healey Co., under New York laws, with $20,000 capital; to manufacture motors. Corporators—Herbert T. Jennings, 206 Broadway; James W. McCabe, 215 Pearl street; Sumner Healey, 652 West Fifty-first street, New York, N. Y.

Brooklyn, N. Y.—American Carburetor and Improvement Co., under New York laws, with $25,000 capital. Corporators—Mathias Weiwoda, 1660 Bushwick Ave.; Fred W. Keller, 1814 Broadway; Henry Berliner, 859 St. John's place, Brooklyn, N. Y.

Buffalo, N. Y.—People's Auto Delivery Co., under New York laws, with $100,000 capital; to transfer baggage and freight and manufacture automobiles, carriages, carts and motor vehicles. Corporators—David S. Ferris, Henry E. Juengling, and Hugh E. Barrett, Buffalo, N. Y.

New York City, N. Y.—Jenness Motor Truck and Equipment Co., under New York laws, with $100,000 capital. Corporators, Edgeworth Smith, 136 Fest Forty-fourth street, Thomas E. Fitzgerald, 30 Nassau street; J. Frank Phillips, 605 West 111th street, New York City, N. Y.

In the Retail World.

A. G. Bigelow, of Des Moines, has opened an agency for Maxwell cars at Dubuque, Iowa.

Corder & Flinn is the style of a new firm which has located at Broadway and Seventy-sixth street, New York. They are handling the Acme car.

D. W. Cook, formerly superintendent of the Western Tool Works, Galesburg, Ill., has become a partner in the Galesburg Automobile Co. A. A. Addis is senior member of the firm.

C. Charles Jones, who conducts a garage on Ella street in Beatrice, Neb., is reported to have perfected plans for the erecting of a building 100 by 30 feet, adjoining his garage in which automobiles will be manufactured. He expects to form a $75,000 company to further the enterprise.

The Livingston & Ramsdell Motor Car Co., New Jersey State agents for the Palmer & Singer automobiles, formally opened their garage in the new De Camp building, 284 Halsey street, Newark, on Wednesday evening, 6th inst. Several hundred visitors were entertained at a collation. This company formerly was in Jersey City.

Germane Becomes Standard Sales Manager.

F. M. Germane, formerly located at Chicago as western representative of the Standard Roller Bearing Co., has been appointed sales manager of the company; he, of course, will have his office at the factory in Philadelphia, where, in fact, he has been located for the past 18 months.

Green Acquires a Top Plant.

C. F. Green has purchased the top plant of the Automobile Equipment Co., Detroit, and combined it with his interests in the Motor Specialty Co. of the same city. Previously Green was connected with the former concern.

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POPE TO DECLARE 25 PER CENT.

Substantial Dividend Now Actually in Sight—Facts and Figures Brought Out at Court Hearing.

The creditors' dividend, which it was known the receivers of the Pope Mfg. Co. have been planning to distribute, but the amount of which was a subject for speculation, now actually is in sight. It probably will be ordered by the courts within the next few days and will amount to 25 per cent.

These facts were brought out last Friday in the Superior Court at Hartford, Conn., when Albert L. Pope, one of the receivers appeared and made an application for an allowance for the receivers, Albert A. Pope of Hartford, and George A. Yule of Kenosha, Wis., for their services.

A. L. Shipman for the receivers, said the receivers of New Jersey had received $1,500 apiece, and Mr. Pope had received $2,500 on account in Connecticut before the appointment of Mr. Yule. Both were giving their entire time to the conduct of the business and they asked for $500 a month apiece.

Joseph L. Barbour, representing six creditors who held claims to the "large" amount of about $2,000, said his clients were getting restive over the payment of large salaries to the receivers and no payments to the creditors. Mr. Pope countered heavily by stating that he was present at a meeting of a creditors' committee in New York on Thursday where claims of over $1,000,000 were represented, and that these creditors had stated that they would not oppose a compensation of twice the amount asked.

The difference in the attitude of creditors, as thus shown, caused a smile to appear on the faces of those present.

Judge Curtis ordered an allowance of $500 for the receivers for their services.

It was in the course of the hearing that Receiver Pope told the court that the Pope company has liabilities of $1,650,000, quick assets of $5,000,000 and full assets of $7,000,000, and that with $1,000,000 in cash on hand, it was expected that within a few days the court of New Jersey will order a 25 per cent. dividend to those creditors whose claims have been allowed.

Suit to Recover Richcreek Assets.

Harry J. Milligan, trustee for Seth M. Richcreek, bankrupt, has filed suit in Indiana Supreme Court to recover $10,000 from the Ford Motor Co. and Frederick A. Joss. The complaint alleges that the amount was paid to the two defendants about November 25th by cash and notes upon John N. Navin, the Gibson Automobile Co., J. H. McKernan, Susan McKernan, John J. Williams, English Woolen Co., American Engineering Co., the Capital Investment Co., and others. The complaint alleges that upon the date the notes and cash were given Richcreek was insolvent and his condition was known to defendants. The suit is brought on order of the United States District Court for which Milligan is acting, on the ground that the payment, if allowed to stand, would be granting the defendants preference over all other creditors.

April Report of the E. V. Receivers.

The receivers of the Electric Vehicle Co. have filed with the clerk of the Superior Court. at Hartford, Conn., a report of their transactions during the month of April. The report is as follows:

Sales.

Charges on account and cash sales	$63,351.35

Purchases.

On account	$17,639.46
Cash	221.15

Cash Statement.

Receipts.

Cash on hand April 1, 1908	$53,816.91
Cash collected on E. V. Co account	3,137.81
Cash collected on receiver's account	70,004.30
Cash collected on Selden royalty	7,721.84
Interest	136.34
Illinois receivers	2,207.50
	$136,024.07

Disbursements.

Payroll	$21,239.35
Traveling expenses	100.00
Pur. creditors	8,368.00
Freight and express	46.96
Salesmen's commissions	120.00
Petty cash	221.69
Assoc. L. A. M.	3,531.30
Insurance	1,056.44
Advertising	131.90
Storage	275.00
	$35,090.68
Cash receipts	$136,024.07
Cash disbursed	35,090.68
Balance on hand May 1	$100,933.39

Maxwell Seeking Pacific Coast Site.

W. B. Jameson, representing the Maxwell-Briscoe interests, is reported as having visited several California cities with a view of definitely locating in that part of the country the Maxwell branch factory, which the Motor World several months ago reported as being contemplated. Jameson is quoted as saying that the factory will have a capacity of 3,000 cars and will be in operation before the year ends.

Parish & Bingham to Make Trucks.

The Parish & Bingham Co., Cleveland, Ohio, have acquired an interest in and made arrangements with the McCrea Motor Truck Co., also of that city, to engage in the manufacture of McCrea electric trucks. These are the small trucks designed for what may be termed interior use, that is for handling baggage at railway terminals, for transporting factory products within factory yards, etc.

"BETWEEN THE SHOWS" MODELS

Pennsylvania Adds Two to Its Regular Line—Planning Factory for Forthcoming Four Cylinder Roadster.

Ordinarily the practice has been to use the automobile shows as the time and place for the introduction of new models. But there is a well defined tendency to break away from the customs of the past in this respect and to bring out new designs during the riding season. The most recent example of the "between the shows" development is furnished by the Pennsylvania Auto Motor Co., who just have announced the addition of two models to their regular product.

One of the new comers, a five-passenger touring car, is styled "Pennsylvania 25." The power plant consists of four cylinders 4¼x4¼, with valves in the heads. The unit axle and transmission construction is similar to that employed in the present type "C" car, though the wheel base of the new car is slightly less than that of the earlier model, being 105 inches. The price of this new model is $2,250. The first of these cars will be on the road in about six weeks. The other model, which is well under way and which is expected to be given a "try out" during the next three weeks, will be called the "Vanderbilt." The power plant, transmission and wheel base will be identical with the "25," but with a higher gear ratio and a light two-passenger roadster body. It is announced that this car will be guaranteed to develop a speed of 75 miles an hour and absolutely to be a stock car.

The company now is preparing plans for a two-story building 125 feet by 281 feet, the building is to be devoted to the construction of a four-cylinder roadster which will be produced in the fall. At the present time the company will give no detail information of this roadster excepting to announce that it will be sold for $1,200, will be thoroughly up to date in detail and construction and will be made in only one model, or two passenger roadster.

Elmore Taximeter Cabs for Washington.

The Terminal Taxicab Co., who control the carriage privileges of the terminal station at Washington, D. C., have contracted with the Union Automobile Co., the Elmore agents in that city, for 35 Elmore taximeter cabs, deliveries to commence within 60 days. The contract carries with it the exclusive privilege of such service for a period of ten years.

Hobbie Building Buggies Now.

L. W. Hobbie is reported building a 12 horsepower motor buggy on a limited scale in Hampton, Iowa. He styles his creation the "Hobbie Accessible."

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Elegance and Efficiency



Oakland Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail light, generator, horn, tools, jack, pump and batteries. Top, $75.00 extra.

Note the straight-line Body—the hall-mark of Quality.

MATHEMATICALLY EXACT

The Oakland car, in its completeness, is an assemblage of parts, every one of which has been studied and worked out in detail, the result being a matter of mathematical certainty.

There were no theories to advance, no experiments to be proved. Engineering skill and extended automobile experience were united to produce the simplest, most efficient and economical motor car possible. Price was not considered, for elimination of costly complexity and a proper understanding of the object in mind regulated that consideration.

Maximum of Power; Minimum of Parts

The Oakland car was designed to realize to the fullest extent the possibilities of the gasolene motor in its simplest and most economical form. This includes first cost, cost of maintenance, operation and long life. We honestly believe the Oakland will stand more hard, legitimate abuse with less attention than any other automobile, regardless of price.

Simplicity of Construction

The power plant is a two-cylinder vertical engine, perfectly balanced, absolutely free from vibration, water cooled by the thermo-syphon, or gravity system (doing away with all gears, pumps, etc.), a transmission that the planetary system ought to be, but isn't, shaft drive with all bearings of more generous surface than provided for in most larger cars, and delivers TWENTY HORSEPOWER AT THE DRIVING WHEELS. Lubrication is positive and unfailing. Engine design insures perfect ignition. Carburetion is constant at all speeds. Semi-elliptic front and full elliptic rear springs provide luxurious riding qualities.

The Oakland is making friends by "making good."

Runabout, $1300 Tourabout, $1350 Touring Car, $1350

Oakland agents are already making money. Would you be one of them? Act NOW.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MAY 14, 1908

The Matter of Personal Responsibility.

Nothing would appear more supremely ridiculous at first thought, than the decision of the Tribunal of Louviers that the driver of a motor car is personally responsible for the safe conduct of the driver of another following directly behind it. As well, one might say, make him responsible for the safety of the driver of the car ahead. But then, French laws and French legal decisions are frequently more or less peculiar according to the American understanding.

For example, a law recently enacted provides that any "conductor" or owner of a motor vehicle who, "having been in a collision with any other vehicle or individual or object, does not immediately stop and give his name and address to the police or other representatives of the law," shall be punished by a heavy fine and several months imprisonment. This is entirely independent of the offender's actual responsibility for the accident, independent of its extent, of its nature. Thus the owner of a car which became involved in an accident due solely to contributory negligence on the part of a second party, if he failed to identify himself to the police at once, might be subject to heavy punishment for the secondary and wholly independent offense.

That there is some excuse for such queer laws as these appear to be, is evidenced from a glance through the morning papers almost any day. Human nature is unchanging, and the causes which have led to such enactments are the same in all countries. Possibly they are accentuated in lands where good roads prevail, but they exist everywhere.

The truth of the matter is that every automobile driver ought to be impressed with his own personal responsibility in the matter of the power under his control. It is a power which may make him disreputable, a menace to the safety of all other users of the highway, or an equally inoffensive member of the crowd. Where that responsibility is lacking, the inevitable counteracting tendency is to establish his liability in one way or another by legal means. However unpleasant the legal form of remedy may be, it is frequently necessary, though not always justifiable in its severity.

In America, though the motoring and non-motoring groups of the public are succeeding more or less successfully in adjusting their differences, and as a rule, are dwelling peaceably together, there still is lacking in a large proportion of the former class the proper spirit of personal responsibility. In just measure to its lack, the chance of increasing weight upon the legal yoke is developed. Most automobile laws assume the purely logical aspect of class legislation. As such they are all the more hateful than would be the case were their application more general. But it is to be remembered that in most instances, they could not be established, were it not for the carelessness of many owners and their drivers in the very matters against which the apparently petty laws of France and other European countries specifically provide.

Lubricants and Lubrication.

Oddly inconsistent is the motorist who, after spending a half hour in anxiously pawing over a dozen different kinds of spark plugs before he can make up his mind which one to choose, will hastily order the garage attendant to put a half pint of oil in the car, and drive away, satisfied that he has done wisely. Another time, perhaps, the same motorist will spend two or three hours adjusting his lubricator or use up a half day with a coil expert, because his ignition system is not working as it should and the plugs persist in sooting up—or down. So long as he pays a good price for his oil, and takes pains to see that it is properly fed, it seldom occurs to him that the root of his troubles may be found in an amber liquid with a bluish cast, which he has purchased innocently by the price tag alone. Yet it is safe to say that no small portion of the motorist's engine troubles may be defined and perfectly well accounted for by the three little letters which spell oil.

The great difficulty is that the average motorist is in no way capable of specifying the qualities which are actually requisite in a proper oil for his engine, and that were he so able, he would not be able to prove their existence without extensive laboratory paraphernalia. Such being the case, there is but one method of escape from the evils of stinking exhaust, foul cylinders, and gummy bearings, which is to buy only a brand which is recommended extensively and known to be suitable. Unfortunately not every maker is as scrupulous as he might be in recommending an oil for his car, but those who are careless in this respect are comparatively rare. It is a fortunate circumstance also that there are on the market several well known brands of oil which are so reputable as to be beyond question. The motorist who specifies either of these —and gets it, is practically certain of obtaining satisfactory results.

There is still the chance, however, that the dealer may belong to the unhappy breed of substitutors, or that in his effort to swell his profits, he is in the habit of boosting the price of inferior oils, for the sake of attracting the custom of buyers who crudely suppose that high price and good quality go together in the compounding of lubricant. Chicanery of this sort is deplorably common, to be sure. Furthermore, there appears to be but one way in which it is to be crowded out of existence. That is for the buyer to insist on obtaining his own brand, and making trouble for the dealer who persists in selling him another.

Dealers who are ambitious to advance their own interests might even make it a point to advertise their stocks of popular brand

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lubricants, to recommend them to all customers, and explain how it is that unknown and nameless brands may be injurious to the machine and so doubly expensive to use. If there is insufficient profit in the reputable oils, it would even be more advantageous to advance the price of the standard article than to boost a poorer or a nameless grade which is of questionable quality. It would be better for the market, better for the dealer in the long run, and vastly better for the public. For once it became understood that the brand was the only practical and available criterion of real worth, there would be no quibbling at terms which were within reason.

Improvement of the Electric.

It is a flattering characteristic, rather than otherwise, that the electric vehicle should have attracted so little attention, relatively speaking, during the past two or three years. While the gasolene-driven machine has continued to be an object of anxious solicitude to the general public, the public, and even a good share of the technically minded as well, practically has ceased to notice the electric. It has become sufficient unto itself, and henceforth its properties and its advancement are relegated chiefly to those to whom its interests are of a specific nature. Outside its own particular branch of the trade, the problems connected with the design and construction and maintenance of the electric vehicle have come to be regarded as wholly incidental to its operation, while that has become merely a matter of dollars and cents with the user. It is rendered conspicuous by the very absence of uncertainty in its performance, and by the economy which is its strongest advantage.

Since its development was lost to view, more particularly since the general public ceased to prate of the perfect battery of former promise, many improvements have been made in its construction. The more significant of these are sketched by Mr. Churchward elsewhere in this issue. Aside from the battery question, the improvements in motor construction and mounting, in controller design and in the general setup of the vehicle as a whole have been of more sweeping nature than the average motorist has been led to suppose. In fact, so great has been the success of these improvements that the electric vehicle engineer has been forced to resort to close discriminations and the finest of observations in order to carry the improvements still further.

Hence the investigation of the subject of "wattage," and the factors which lead to its reduction. If, wherever the term is employed, the word horsepower be substituted for it, the non-technical reader may be better able to appreciate the significance of its use. Both expressions are equivalent to the extent of signifying the energy absorbed in transporting the vehicle and its load. But the electrical unit is subject to a finer analysis that the mechanical term, so that it is possible to reduce the total figure to terms governed by conditions of load, grade, road condition, mechanical friction, and even to the number of stops made per mile or per hour.

To the average motorist, it may be, these factors do not appeal. But when it is considered that the wattage is what the owner pays for, that it is directly proportional to the precious dollar, its importance becomes more evident. What is quite as much to the point here, however, is that while the designer of the gasolene vehicle is still struggling with little details of design, the electrician has got on to broader fields and has reached a point where his further improvements may be guided and controlled solely by the question of economy in service. Except for the power plant, the two types of vehicle are similar, and the problems connected with their design are closely related. Up to this point, the two branches of the industry are abreast. In power plant design, and in upkeep, however, the latter is considerably in the lead.

Although comparatively little stir is being made just now by the two-cycle movement, that fact should not be taken as indicating a cessation of development, or that the propaganda is losing strength. On the contrary, if the records of the Patent Office are to be accorded any value, nearly as much activity is being devoted to the perfection of the two-cycle motor, as to the more common type. The voluminous nature of patent returns does not measure progress, to be sure, but it does measure the stuff of which progress is made—a just appreciation of the inducements and possibilities of the type. The two-cycle principle has been reduced to practical terms. Many motors now in use are giving absolute satisfaction. All that is required, is proper confidence in it among users, in order to stimulate the makers to further efforts at perfecting it.

COMING EVENTS

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climb on Perry and Phillips hills.

May 16, Wilmington, Del.—Delaware Automobile Association's 45 miles roadability contest to West Chester, Pa., and return.

May 16, Paterson, N. J.—North Jersey Automobile Club's 100-mile endurance run.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 23, Albany, N. Y.—Albany Automobile Club's annual hill climbing contest up Menand's hill.

May 30, Salem, N. J.—Salem Horse Show and Athletic Association's track meet.

May 30, New Bedford, Mass.—Hill climbing contest up Smith Mills hill.

May 30, Denver, Colo.—300-miles road race for stock chassis.

May 30, Boston, Mass.—Bay State Automobile Association's race meet at Readville track.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio.—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

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GOV. FORT PRESSED THE BUTTON

Ajax-Grieb's New Plant Starts Under Distinguished Auspices—Trenton's Mayor Assists in the Ceremonies.

When Governor Fort pressed the button which started in motion the machinery in the new plant of the Ajax-Grieb Rubber Co., at Trenton, on Monday, the 11th inst., his action was perhaps more typical of the sentiment of New Jersey citizens toward the automobile that that of the law makers of the State. The occasion was the official opening of a substantial addition to the new plant, which recently has been completed.

By special trains from New York and Philadelphia the guests of the company were brought direct to the factory, where many of the prominent citizens of Trenton already were gathered. With a profusion of flags and bunting the new brick building presented a gala appearance. The visitors were conducted to the enormous room which occupied the entire upper floor, where the opening exercises were to be held. Here the decorative scheme was continued; the walls and ceiling being almost hidden by American flags and bunting, and posters of the Ajax girl, while at one end of the room was the stage for the speakers and later was the scene of a vaudeville entertainment.

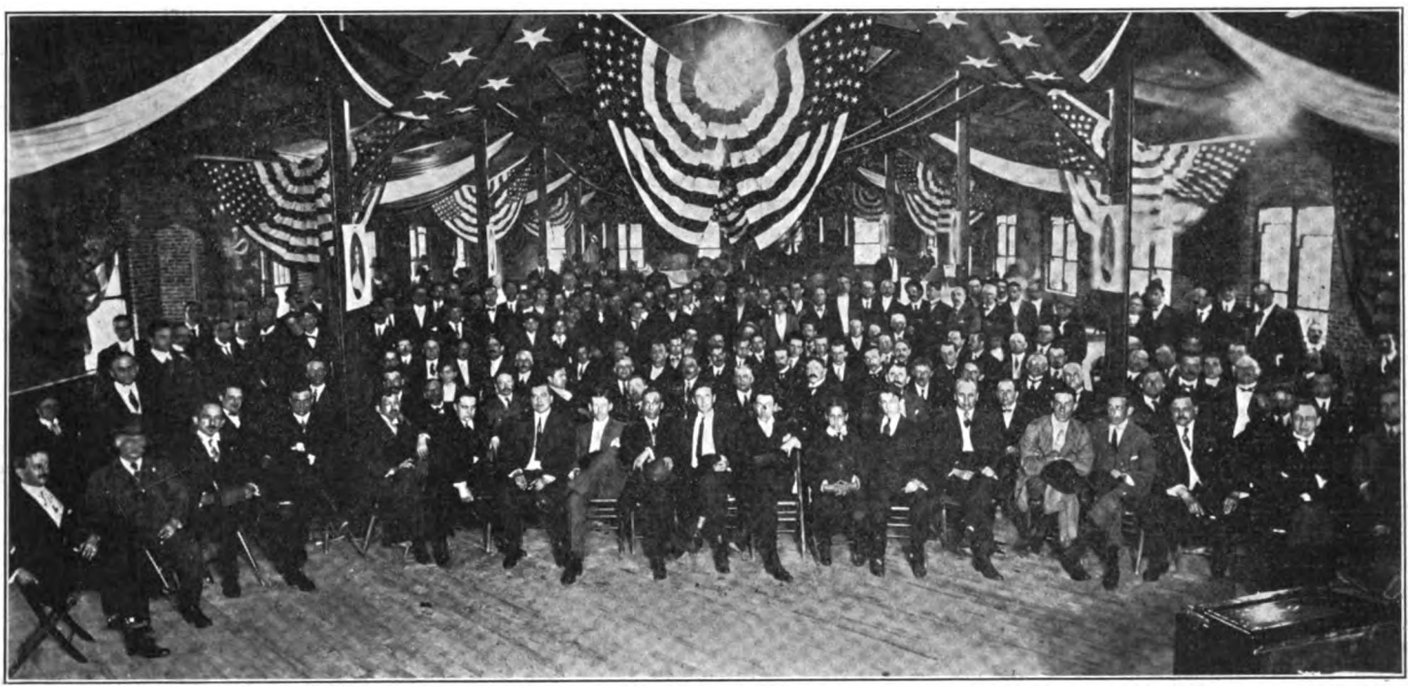
As Governor Fort and Mayor Madden of Trenton entered the room they were heartily cheered by the assemblage and were conductd to the stage by Horace De Lisser, president of the Ajax-Grieb Co., and Harry Grieb.

The exercises were opened with an address by President De Lisser. He spoke of the early struggles of the company and dwelt strongly on the financial and moral support that was given to the new enterprise by Henry Ford, J. D. Maxwell, Benjamin Briscoe, Robert A. Patterson, William Mitchell Lewis, and James Couzens.

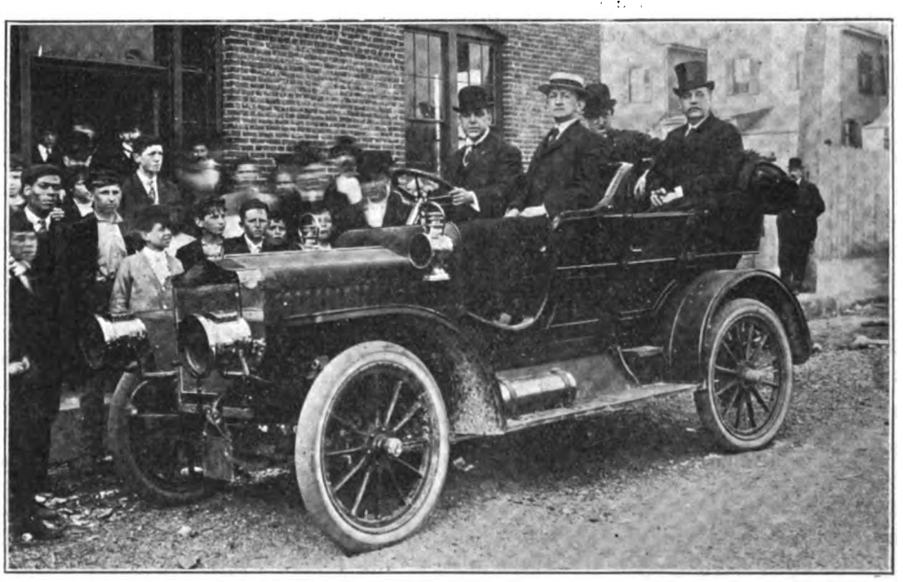
"Without the valuable assistance which these men rendered," said Mr. De Lisser, "our undertaking must have resulted in failure. But they stood by us with counsel and encouragement, and this interest backed by the generous and enthusiastic support of our friends in the automobile industry has made possible and necessary this enlargement of the plant, which is the occasion of this gathering.

"I am deeply sensible of the great debt which the Ajax-Grieb Rubber Co. owes you," continued De Lisser. "I cannot express my feelings as I try to tell you how much we appreciate the friendship that has been given us by you and by the interests you represent. Even my best friends have never granted that I can make a speech, yet if I possessed the ability of a trained orator I could not tell you how much I thank you for the interest in our success that you have shown in the past, and are showing now by assisting in making memorable this evidence of the increased recognition of the merits of our product which compels this addition to our factory."

Governor Fort was then introduced and



AJAX-GRIEB GUESTS ENJOYING THE VAUDEVILLE ENTERTAINMENT



HORACE DELISSER (AT WHEEL), HENRY GRIEB, GOVERNOR FORT AND MAYOR MADDEN

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made a short speech in which he referred to the Ajax-Grieb company as being an important factor in the development of the State's manufacturing interests. He congratulated the company on their progress and wished them a full measure of prosperity, and expressed the hope that other industries would locate in Trenton and help to strengthen the reputation which the city already had of not being dependent on its legislature for its prominence amongst American cities.

Mayor W. F. Madden, of Trenton, followed the Governor, and spoke in the same vein. He congratulated President De Lisser and his associates on their success and hoped that the future of the company would see its enlargement and development as its past had seen it.

At the close of the speeches the guests were served with lunch, after which they were shown through the factory and initiated into the mysteries of tire making. Later they again assembled on the upper floor where they were joined by the employes of the company and all witnessed a short vaudeville program.

The new factory increases the Ajax capacity to 600 complete tires per day, covers and inner tubes, to say nothing of an immense output of druggists' sundries and other moulded rubber specialties.

Law that Saps Value of Patents.

Beginning August 1st., a new provision of British patent law goes into effect which will act as a direct curtailment of the validity of patents covering articles of foreign manufacture. The clause, which is known as "Section 27, of the Patents and Designs Act of 1907," provides in substance that "Any article patented in the United Kingdom, which is manufactured exclusively or mainly abroad may, on the application of anybody bringing the facts to the knowledge of the Comptroller of Patents, be considered as not protected by letters patent." In consequence of this provision, it is expected that considerable alteration will be made in the status of firms of foreign origin doing business of a proprietary nature in the British Isles.

Cadillac Conducting a Pictorial Campaign.

In a campaign to reach new customers a novel educational and selling method is being developed by the Cadillac Motor Car Co., of Detroit, involving the use of a "picture show" and a lecturer. A complete and expensive stereopticon equipment showing more than 200 views, either taken inside the factory or illustrating Cadillac achievements in various parts of the world, is provided, accompanying which is an hour's interesting and breezy talk on the subject of automobiles in general and the Cadillac in particular. The company's agents invite owners and "prospects" to their local salesrooms to constitute the audiences, and the entertainment is said to be already "booked ahead" for the entire season.

WHAT AILED THE CARBURETTER

Simple Trouble that was a Long Standing Mystery—The Cause Easily Eliminated When Found.

It is often held against the gasolene engine that one of its most provoking characteristics lies in the fact that many of the trifling disarrangements which may from time to time affect its running are exceedingly baffling to locate, the difficulty in this respect often being greatly out of proportion to the seriousness of the trouble. Several seasons ago a prominent expert humorously hit off the situation by saying that in automobile practice the chief difference between steam and gasolene engines was that "with steam engines it takes but a minute to find the trouble and an hour to fix it, while with gasolene motors it takes an hour to find the trouble and a minute to fix it." A recent verification of the latter half of the epigram came within the experience of a prominent New York motorist who has been driving for several years and who rightly considers himself not inapt in finding and remedying trouble when he has it.

For several weeks he had been bothered with his engine missing and cutting uncertain capers. Consultation with repairmen and others soon narrowed the cause down to the carburetter. The latter was taken off and cleaned, the needle valve readjusted and its parts inspected. When the device was replaced the car apparently ran all right but an out of town trip in hilly country developed all the old faults again. In steady climbing on long hills the motor would work very well but on the more level roads where frequent alterations of speed were necessary, it would behave badly indeed. Search after search revealed nothing calculated to disclose the nature of the difficulty, and the driver of the car went from week to week getting the best service out of the machine that he could, but constantly annoyed by the mystery.

In preparation for the drive to the Briarcliff race, he was cleaning the exterior of his engine and oiling up, when he discovered that every time the accelerator pedal was pressed a column of gasolene squirted from the top of the carburetter float chamber, the latter being completely flooded. A moment more and the cause was discovered. The rod leading from the accelerator pedal to the throttle valve of the carburetter passed, in its movement, over the top of the float. Consequently the float would be pushed down every time the accelerator pedal was depressed or released, flooding the carburetter. The remedy was as simple as the cause and consisted in merely clipping off about quarter of an inch from the top of the pin, so that the accelerator rod would not strike, after which the engine ran as smoothly as could be desired. The original cause of the trouble was probably a too vigorous depression of the pedal, slightly bending the rod so that it touched the pin.

Now the Art Dealers Complain.

Again is the automobile accused of interfering with the success of mercantile pursuits. The jewelry trade, having sent forth its wail that motor cars were preferred to gems, must now yield the floor to the picture dealers, who are taking their turn in ascribing the dullness in business to the preference of the wealthy for automobiles instead of paintings. A dealer, who is prominent in art circles, recently speaking of business depression said:

"There is little or nothing being done by the picture dealers. Not only has the volume of sales materially decreased, but it is extremely hard to make collections. One of my patrons, with whom I have had business relations for several years, 'held me up' on the matter of a comparatively small bill which was overdue, and a day or two later I saw him enjoying an outing in a new automobile, which he had just purchased, though he has three others. I have bought several pictures lately," the art dealer continued, "from men who wanted the money for motor cars. Walls which have contained five of six paintings now are occupied only by three or four, and these are separated with remarkable ingenuity so that the effect of the display continues to be good.

"Pictures have always been considered a luxury and automobiles used to be so considered, but the conditions seem to have changed and with the automobile in the necessity column there is little chance of supplying luxuries in the shape of pictures to men who want necessities in the shape of motor cars."

Continental Gets Big Order for Balloons.

While generally it is assumed that the activities of the Continental Tire & Rubber Co. are largely confined to the manufacture of tires, a recent order received from the British government for balloons, proves that such is not the case. The India office have placed an order with the Continental company for 48 balloons, to be used for scientific purposes. The company already has supplied material for many successful air ships, balloons and aeroplanes, notably the "La Patrie,," Zeppelin, "Ville de Paris," De la Vaux, and the Farnum aeroplane.

Automobiles for Mail Collection.

Automobiles are to be extensively used by the French government for the collection of mail in Paris. A number of cars were placed in this service a few days ago. It is intended to extend rapidly the use of automobiles for the purpose, and it is thought that by October there will be 120 gasolene cars used for the collection of mail in the French capital.

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LOWELL PROJECTS BIG ROAD RACE

Popular Movement for 200 Miles Contest on July 4—Ten Miles Circuit of Fine Roads Available.

Lowell, Mass., has contracted the road racing fever. If plans of the Lowell Automobile Club materialize the fever is expected to break out in a 200-miles race over a ten miles circuit in that city on July 4th. Though the matter was broached only a few days ago the proposition seems to have been received with much enthusiasm in Lowell and no difficulty is anticipated in raising the $10,000 which it is estimated will be required for the race.

A ten miles course has been selected between Lowell and Tygnsboro, including the smooth and level Merrimac boulevard, and Congressman Butler Ames has offered a trophy for the race. Tiffany already is at work on the design, it is stated. The prime movers of the affair are John O. Heinze and Frank S. Corlew, president and vice-president, respectively, of the Lowell Automobile Club.

While no definite statement has been made concerning the eligibility of cars for the race it is probable that it will be restricted to stock chassis. The contest will be limited to 12 cars and the entry fee has been fixed at $250.

According to Corlew the entire course is to be guarded by militiamen, it being claimed that the militia authorities in Lowell and Lawrence and the rank and file of the men are wlling to turn out for the purpose, and that under the law they may turn out in uniform and with arms on the Fourth of July without an order from the governor. If 500 militiamen can be secured the guarding of the course will likely be better than at any race ever held in this country.

The course, which has been selected extends along the boulevard to Tyngsboro bridge, then turns to the right over a short stretch of cross road and then down Varnum avenue to the boulevard. At the Lowell end the club plans to improve a short piece of road, making banked turns and a safe and easy connection between Varnum avenue and the boulevard. This will do away with all sharp turns, as those at the upper turn also will be modified. With its few turns and two long stretches the Lowell course will offer plenty of chance for speeding and as it is only ten miles around will add to the excitement, as the cars will be constantly passing and repassing each other.

The Lowell Club has asked for subscriptions for the promotion of the race and the profits to be derived from the entry fees and the sale of grandstand seats will be divided between the city of Lowell, the town of Tygnsboro and the State Highway Commission, it is stated. One of the main objects of the race is to attract the attention of automobile manufacturers to the Spindle City, as it is claimed that the city of Lowell offers unusual advantages for the location of automobile factories.

Fifteen Events for Dead Horse Hill.

Fifteen events have been carded for the annual Dead Horse hill climb promoted by the Worcester (Mass.) Automobile Club, announcement of which was made this week. The Worcester City Council will give a hearing on the club's petition for the right to close the roads on the day of the climb and it is anticipated that there will be no trouble in this respect. Meantime the work of repairing the roadbed and putting it in shape for the climb is progressing. The list of events is as follows:

Gasolene cars with 60.1 to 75 horsepower, inclusive; gasolene cars with 40.1 to 60 horsepower, inclusive; gasolene cars with 24.1 to 40 horsepower, inclusive; gasolene cars with 15.1 to 24 horsepower, inclusive; gasolene cars with 15 horsepower and under; all makes of motorcycles; free-for-all, open to cars of all types and motive power; gasolene cars selling for $850 and less; amateur event, owners to drive, for the Worcester County championship trophy, to be won three times in succession; gasolene cars selling from $851 to $1,250, inclusive; cars selling from $1,250 to and including $2,000; free-for-all, gasolene stock cars only; cars selling from $2,001 to and including $3,000; cars selling from $3,001 to and including $4,000; cars selling from $4,000 and over.

Events for Jamaica Subway Celebration.

Entry blanks for the straightaway races to be held on Hillside avenue, Jamaica, Long Island, on June 5th, under the auspices of the subway celebration committee and the Long Island Automobile Club were issued Tuesday. The contestants will be divided into nine classes, as follows, each class having a chance for a try at one kilometre, one mile and two miles, although it will require a separate entry for each: Open to gasolene cars selling under $1,250; open to gasolene cars selling from $1,251 to and including $2,000; open to gasolene cars selling from $2,001 to and including $3,000; open to gasolene cars selling from $3,001 to and including $4,000; open to four-cylinder cars selling for over $4,000; open to six-cylinder cars selling for over $2,500; free for all, open to cars of all types and motive power; open to steam cars only (stock); stock chassis open to cars having 301 to 550 cubic inches piston displacement.

Wilmington Schedules a Reliability Run.

Saturday next, 16th inst., the Delaware Automobile Association will promote its first contest. It will be in the nature of a roadability run, on schedule time, over a 45 miles course from the Wilmington (Del.) court house through Kennet Square and West Chester back to the starting point.

AMERICAN ENTRY RETAINS ITS LEAD

Credited Fifteen Days in New York-Paris "Race"—Contestants Now Nearing Siberia on Steamship.

Because of the lost time in going to Alaska, where the route proved impassible, The Thomas car in the New York-Paris "race" has been allowed a 15 days' start over its competitors, from the time they reach Siberia.

The Italian Zust and the French De Dion did not go to Alaska, but sailed from Seattle for Japan, and the judges of the race at a recent meeting decided that the Thomas would have been 15 days ahead of them if it had done the same thing. The German car, Protos, has been handicapped 15 days back of the Zust, and De Dion because it was put aboard a train and shipped from Ogden, Utah, to Seattle.

All of the cars are now on the boat from Japan to Siberia, and on landing the American car will be counted as 15 days ahead of the French and Italian cars and 30 days ahead of the German entry.

Trophies for Hartford Endurance Run.

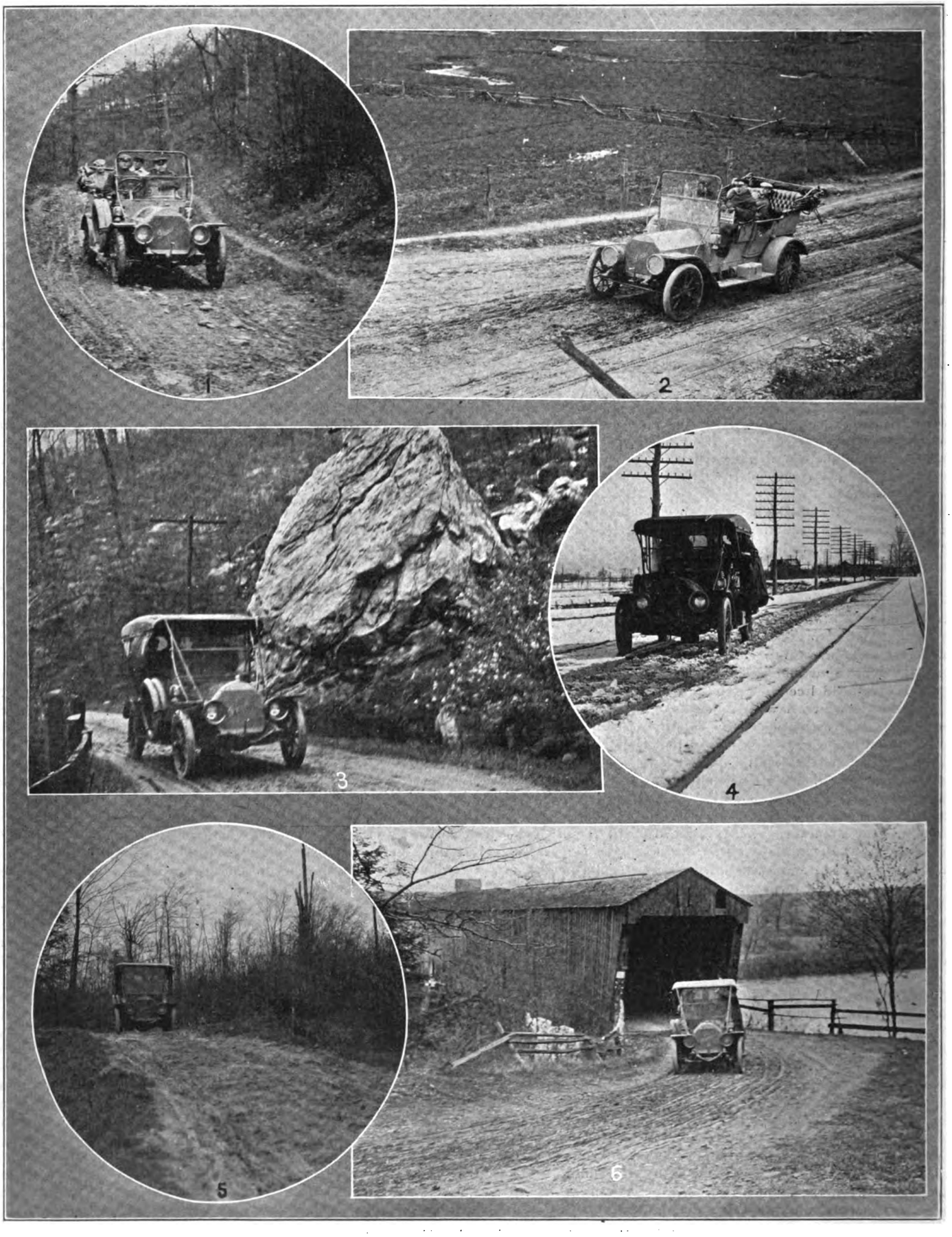
What is expected to prove to be one of the largest endurance runs ever held will take place on Saturday of this week, 16th inst., over a course of 174 miles leading from Hartford, arranged by the Automobile Club of Hartford. When the entries closed this week 49 nominations had been made. Six trophies are to be disposed of as follows: To the car listing at more than $1,500 which makes the nearest to a perfect score; to the car listing at $1,500 or less which makes the nearest to a perfect score; to the car listing at more than $1,500 and less than $3,000 which consumes the least gasolene; to the car listing at more than $3,000 which consumes the least gasolene; to the car listing at less than $1,500 which consumes the least gasolene, and to the car which does most consistent work.

Proposed Double Transcontinental Race.

Having been "second fiddle" to Le Matin, of Paris, in the New York to Paris race promotion, the New York Times is now endeavoring to get up a race of its own, and has undertaken to interest manufacturers and others in a trans-continental contest across North America, from New York to San Francisco and back again, a different route being taken for the western and the eastern trips. So far all the plans are rather hazy, but in addition to definitely promising a suitable trophy the following tentative plan of the contest has been outlined: A contest for regulation stock cars under a maximum power and over a minimum weight, a speed trial, an endurance test, the cars to be handled by a single crew, and scored according to a strict schedule.

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VIEWS ON THE GLIDDEN TOUR ROUTE FOR 1908



1. ON THE ROAD TO PITTSBURG. 2. THROUGH PENNSYLVANIA OIL FIELDS. 3. PICTURESQUE ROAD TO JOHNSTOWN, PA.
4. JUST OUT FROM BUFFALO. 5. ON THE CREST OF THE ALLEGHANIES. 6. COVERED BRIDGE ON ROAD TO HARRISBURG.

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SELECTING THE GLIDDEN ROUTE

Pathfinders Make Substantial Progress—New York not in Itinerary and New Jersey to be Avoided.

Buffalo, Pittsburg, Philadelphia, Albany and Boston will be the four largest cities touched by the American Automobile Association's touring contest for the Glidden trophy this year and they will be reached in the order named. New York City will not be entered and New Jersey soil will not be touched during the tour.

The route was changed on Monday so as to include Philadelphia and avoid New Jersey. Secretary Dai H. Lewis and his six-cylinder Premier pathfinder had reached the Delaware Water Gap, but Chairman Hower directed that they go back to Harrisburg and lay the route from there to Philadelphia. The big car, driven by Ray McNamara, did not get away from Harrisburg until nearly noon on Monday and did not reach Philadelphia until Tuesday night. Tuesday's run made the twelfth day out for the pathfinding car, but on the tour itself Philadelphia will be the stopping place on the night of the sixth day out, or the fifth day of travel, the Sunday previous being spent at Bedford Springs, Pa.

The reason for eliminating New Jersey from the route of this year's tour is the sandbagging motor law of the State. It was originally planned to run from Philadelphia to Atlantic City and spend Sunday at that resort. It would have cost the contestants about $13 license fee for each car, however, for the two days and so the State was avoided and instead of getting a reasonable fee, like other States, it will get nothing. Its principal resort will likewise be minus several thousand dollars that the tourists would have spent there but for the attitude of the State's law makers toward those who use automobiles.

The run for each day and the stopping places at night and Sundays, as thus far arranged, are: July 9, Buffalo, N. Y., to Cambridge Springs, Pa., 117.4 miles; July 10, Cambridge Springs to Pittsburg, Pa., 110.2 miles; July 11, Pittsburg to Bedford Springs, Pa., 106.4 miles; July 12 (Sunday), at Bedford Springs; July 13, Bedford Springs to Harrisburg, 107.3 miles; July 14, Harrisburg, Pa., to Philadelphia, 133.5 miles; July 15, Philadelphia to Milford, Pa.; July 16, Milford to Albany; July 17, Albany to Boston.

From Boston the tour will go up into Maine, thence back into the White Mountains and probably will disband at Saratoga on July 22 or 23. The details beyond Boston will not be settled until after the pathfinding trip is completed.

As the Premier pathfinder has proceeded, Secretary Lewis has made note of every turn, of the character of the roadbed, the land marks, the toll gates and their fees, and of the distances between each turn and crossroad, so that the route book issued will be more complete in detail, more accurate and of permanent value as a touring guide. Nearly all of the overnight stops will be in big cities, where there are ample accommodations, and arrangements have been made all along for putting up the tourists at regular rates.

Following the usual custom, the first few days of the tour have been made comparatively easy and the harder days will come later in the mountains.

Four Days' Carnival for Stroudsburg.

A four day automobile carnival during the last week of June is the ambitious program announced by the recently formed Monroe County Automobile Association, of Stroudsburg, Pa. If present plans are carried out the carnival will be one of the biggest of its kind that has been attempted. For the first day it is planned to run a sealed bonnet reliability contest, starting simultaneously from New York and Philadelphia, to end at Delaware Water Gap, and this will be followed on the second day by several hill climbing events for amateur drivers to be run on a less tortuous hill than that used by the professionals. The third day will be devoted to a series of time trials over a level stretch of road near Mount Pocono, while a half mile track in the neighborhood of Stroudsburg will be used for a gymkhana meet on the final day of the carnival.

Trophy to be Converted into Badges.

A solution, as unique as it is unusual, has been found by the Norristown Automobile Club, by which it may dispose of the silver trophy that was won by 15 perfect scorers in its recent endurance run. The owners and drivers of the cars that finished the run without points against them met last week and voted to melt the trophy that had been offered to the winning car, and run it into badges. They considered this expedient more satisfactory than having their names engraved on the cup.

Stanley Hill for Cleveland's Climb.

For the first time since the inauguration of its annual hill climbing contest the Cincinnati Automobile Club will not hold its contest on Paddock hill this year. The date has been set for May 28th, and Stanley avenue has been selected as the venue. The course is a new one averaging from 11 to 15 per cent. grade. It has two turns, but both are slight. The change was made because of the poor condition of the Paddock hill road.

Following the lead of other prominent clubs throughout the country, the Albany (N. Y.) Automobile Club is determined upon an active compaign against overspeeding. All the members are entering an agreement to report offenders.

CLUB COMPELLED TO TOE MARK

Withdrawal of White's Protest did not Settle Wilkes-Barre Snarl—All Differences Now Reconciled.

Despite the fact that Walter C. White withdrew his protest in reference to the Wilkes-Barre hill climb the A. A. A. racing board declined to grant a sanction to the Wilkes-Barre Club until late last Friday afternoon.

The facts of the case are that White's withdrawal of his protest was absolute and unconditional but the racing board held that the Wilkes-Barre Club should comply with the original ruling of the racing board. For that reason the sanction was withheld until the terms of the original ruling of the racing board were fully complied with. The free-for-all trophy in last year's hill climb, the Board of Trade Cup, is in the possession of J. B. Ryall, and he absolutely refused to surrender it.

The Wilkes-Barre Club offered to give Mr. White a cup equal in value to the Board of Trade trophy and, thereupon, the racing board allowed the sanction. White, however, withdrew all opposition two weeks ago, when the Wilkes-Barre Club offered to give him a medal and to re-engrave the Board of Trade cup, and was in no way responsible for the eleventh hour mix-up.

Reliability Run Plans Kept Dark.

Hiding a heavy secret in their breasts, the members of the Indianapolis Automobile Trade Association are going around with their fingers to their lips, trying to conceal the rules and route of the reliability run which is slated for May 20. These are to be announced only a day or so before the day of the run, so that intending competitors will not have a chance to practice on the route or make elaborate special preparation of their cars. It was also thought that an early announcement of the route would perhaps arouse the antagonism of farmers and others along the roads specified, who might put obstacles in the way of the run.

Smooth Roads for Rocky Mountain Run.

In spite of the fact that it is to be called the "Rocky Mountain endurance contest," thereby suggesting leaps from crag to crag, and the hurtling of precipices, the race for stripped stock cars which is to be held at Colorado Springs, Col., on Memorial Day, will be held on roads that are smooth and far from mountainesque except in their scenic features. The promoters have employed a big force to put the roads in perfect condition for the contest and a large entry list has been secured. The course is known as the Sand Creek-Barr-Brighton course and the grandstand will be at Sand Creek.

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PHOTOGRAPHING ROAD RAVELLING

Government Secures Pictorial Records of the Effects of Motoring—Relation of Speed to Destructiveness.

With a battery of photographers to "snap" its flight, a big racing car going over a mile a minute threw a scare into the farmers along the celebrated Conduit road, outside of Washington, not long ago. Many of them thought it was a machine designed for some of the big world events, and that the photographers were employed by the newspapers. Such was not the case, however, the surprising feature of the affair being that it was wholly a United States Government enterprise.

Inasmuch as the government asserts its ownership and control of the Conduit road, regarding it as a military highway, it can permit as high speed as it likes, a legal point which Marshall Collins of Glen Echo was at one time prone to dispute, but the strength of which has since forced him to give up arresting motoring diplomats and others for the more peaceful occupation of working in a dry goods store. Therefore the Government's racing car was allowed to go the limit.

The object of the apparently mad dashes and the corps of photographers was to give the Office of Public Roads accurate data as to the effect that high speed automobiles have on rock surface or macadam roads. To this end the trials also included the passage of horsedrawn vehicles and automobiles of various weights and speeds, the dust clouds raised by each being photographed.

What was disclosed as a result of the experiments is made known, by the official statement which is in part as follows:

"Those who witnessed the experiments near the national capitol could not doubt for a moment that the various road experts all over the world are correct in the opinion that very rapidly driven automobiles are tearing up the surface of the macadam road, for not only were huge clouds of dust lifted into the air and blown off the road, but careful examination showed that the material under the wheel tracks of the machine was distinctly loosened and ravelled even during the short period of these tests.

"No such effects were noticeable after the passing of iron-tired vehicles; the series of tests beginning with the passing of a horse-drawn vehicle. This was photographed as it moved along, and also as the wagon tires passed a given mark. Then the automobiles were sent over the course. The first was a heavy-weight touring car moving at five miles an hour. A series of pictures was made of that car at varying rates of speed until its maximum of 45 miles an hour was attained. Then the work was taken up by the huge racer, which tore down the road first at a speed of 50 miles an hour, then at 55, 60, and finally at 65. It fairly lifted the road surfacing material as it sped along, regular ridges of rock dust rising from the rear wheels and floating away in blinding clouds. Other tests were made and other pictures taken of various types of heavy cars and runabouts. It was plainly noticeable and was commented on that automobiles moving at the slow rates of speed equal to the speed made by horse-drawn vehicles made very little dust, the theory that fast speeding automobiles are responsible for road surface destruction being pretty thoroughly substantiated by these means.

"The results of this interesting bit of road work will be carefully studied and put together in a paper or papers to be presented to the International Road Congress which will meet at Paris on October 11; for so far-reaching are the ravages of the automobile on the wonderful roads of France that that country has urged highway engineers of all lands to assemble at her gay metropolis in the fall to take up the problem and strive for a solution of it.

"It has long been known to highway engineers that automobiles were shortening the lives of the rock surface roads of the world and many experiments have been made in the past six or seven years to determine the actual cause of the damage done. To understand how the soft broad tires of the modern motor car can work an injury to a surface that not only withstands, but improves under the constant passing and repassing of vehicles with iron tires, one must be apprised briefly of the theory on which, first Tresauget of Lomoges, and later MacAdam of Ayr, worked when giving such highways to the world. They reasoned that a road surfaced with bits of stone would improve under wagon traffic because the iron tires of the passing vehicles would constantly crush the stones and form rock dust particles; that those rock dust particles would not merely fill in all the interstices between the stones, but would also form a surface dust binder; the wettings and rollings tending to cement the dust in a shell-like surface and thus make the entire road one traffic-withstanding, water-shedding mass.

"They reasoned well and wisely. The macadam roads lived up to the theories of their inventors and improved with the passing years until the advent of the automobile. It was but a short time after it came into vogue that highway engineers in all civilized lands learned that a new condition was confronting them, and established customs were being menaced. The trouble was traced to the automobile and studied. It was noted that the soft rubber tire was the highway menace. It crushed no rock itself, and therefore contributed no quota of the needful surface dust binder, while the tremendous tractive force of the rear wheels drew up the dust made by the iron-tired wagons and sent it whirling away over adjacent lands."

FOR GOOD ROADS AND GOOD LAWS

Partial Program for the Convention at Buffalo—Highway Experts and State Governors Who will Attend.

If present plans do not miscarry the good roads and legislation convention which is to be held in Buffalo, N. Y., Tuesday and Wednesday, July 7th and 8th, by the American Automobile Association will assume more importance than was at first supposed. The committee, which has in charge the arrangements for the convention met in New York City on Tuesday of this week and showed that it has not been idle since being formed.

Chairman Robert P. Hooper, of Philadelphia, presided, the other members in attendance being Charles Thaddeus Terry, Frederick H. Elliott, and Alfred Reeves, New York City; Paul C. Wolff, Pittsburg, and George C. Diehl, Buffalo.

Although the list has not been completed it is certain that several noted speakers will address the convention upon the subject of good roads. The speakers who are assured are Joseph W. Hunter, State highway commissioner of Pennsylvania; W. E. McClintock, State highway commissioner of Massachusetts; and Frederick Skene, State engineer of New York. It is expected also that Governors Hughes of New York, Harris of Ohio, and Stuart of Pennsylvania will deliver speeches.

Mayor J. N. Adams of Buffalo will formally present the key of the city to the visiting automobilists on Tuesday, the 7th. The first session will be devoted to a discussion on Uniform Automobile Legislation, and will be under the direction of Charles Thaddeus Terry, chairman of the legislative board of the American Automobile Association. The afternoon will be given over to a discussion on Good Roads, under the direction of Chairman Hooper of the good roads board of the national organization. In the evening the delegates will be entertained at one of the local theaters.

Wednesday morning will be devoted to a further discussion of the subjects relative to good roads and the afternoon will be taken up by a series of practical demonstrations by noted road builders on the maintenance and the preservation of the highways. A feature of this demonstration will be the tests showing the best methods to be followed in preparing dustless roads. An automobile tour of inspection of the roads in construction in Buffalo will be included in the afternoon's program.

At the meeting on Tuesday last Alfred Reeves was appointed chairman of the publicity committee in charge of the convention. George C. Diehl of Buffalo was appointed chairman of the committee on practical demonstrations on roads.

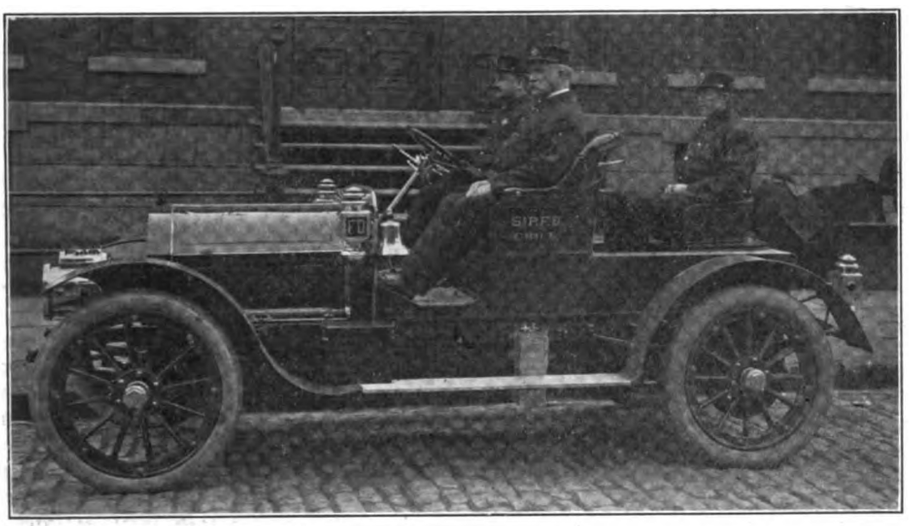
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SPECIAL BODY FOR FIRE CHIEF

Pierce Favors St. Paul by Departure from Stock Model—Conveniences Provided for Head Fire Fighter.

Following the example set by many cities St. Paul, Minn., has furnished the chief of its fire department with a motor car—a 45 horsepower Great Arrow, which was bought from the St. Paul agents of the George N. Pierce Co., of Buffalo, N. Y.

While the makers of the Great Arrow have done practically nothing in the past in the line of designing special bodies, they have made a notable exception to their rule in this case, as the accompanying illustration of the St. Paul fire department's car serves to show. While the chassis is of the standard model, the body has been designed to fulfil the requirements of a fire chief. The rear seat is of the disappearing type, and the rear under-body is arranged to furnish storage for the boots, helmet and other paraphernalia of the fire fighter.



ST. PAUL FIRE CHIEF IN HIS PIERCE GREAT-ARROW.

Ohio Town Bars Automobile Stages.

Commercialism clashed with progress and set the 500 inhabitants of Jackson Center, Ohio, to talking when a local merchant succeeded in pushing through the council an ordinance which practically bars all automobiles from the town. The ordinance provides that automobiles shall pay $1 a day for use of the streets, and owners shall be fined from $5 to $25 for each refusal to pay this tax. An automobile stage line from Jackson Center to Wapakoneta became so popular a local dealer complained it was taking trade from him. The ordinance was the inspiration of his perplexity. Council's move was promptly met by the stage line announcing that it would run its cars only to the town limits of Jackson Center. The ordinance however is worded so that it bars all automobiles from the town unless the tax per diem is paid, but it is not thought that it will be enforced except in the case of the stage line's cars.

Automobile Apparatus for Fire Brigade.

As a result of something like two years of experimental service, in which both steam and electric machines have been employed, Herr Reichel, chief of the Berlin fire brigade, has decided upon a permanent equipment of electrics for service in the inner districts of the city, and of steam cars for the suburban regions. The test, for which an appropriation of about $12,500 was secured, has been most thorough. The electric machine under test averaged two trips daily, frequently running as much as 22 to 25 miles outside the city. During the month of July, 1907, no less than 611 miles were covered; this being about the average mileage of a horse-drawn fire-engine during an entire year.

Automobile Serves as a Traveling Chapel.

While the automobile as an agent for evangelical purposes is not new, there is, however, a smack of novelty in the large sight-seeing car that has been utilized as both a traveling chapel and an advertisement for a Philadelphia church. Every evening the car is filled with 30 gospel singers, accompanied by a trombone player, a cornetist and a minister, at the corner of Broad and Arch streets, and proceeds on a tour. Five stops are made en route when the choir sings and the minister makes a brief exhortation. Two large signs, announcing a "surprising Southern singer" and telling of a "wonder pianist" are prominently displayed on the sides of the car.

Kaiser Wilhelm Giving up His Horses.

Motor cars are growing in the favor of Emperor William, of Germany, to such an extent that he recently sold a number of his horses and has created a special automobile department in the Imperial stables. Already the Kaiser has nineteen machines.

GERMANY SHOWS RAPID GROWTH

Big Increase in Number Both of Pleasure Cars and Commercial Vehicles—Nearly Doubled in Bavaria.

During the year 1907, the use of motor vehicles in the German Empire increased something like 33 per cent. over that of the year previous, according to Consul General Nicolas Ifft, of Annaburg. By the official statistics, recently published, the whole number of vehicles in use on January 1, 1908, was stated to be 36,022. Of these, 34,244 were designed for passenger transportation, and 1,778 for freight. Somewhat more than half of those rated as passenger vehicles, however, were motorcycles.

The increase was much larger, proportionally, in South Germany than in North Germany, being but 17.2 per cent. in Prussia as against 84.8 per cent. in Bavaria and 148.1 per cent. in Hesse. In the city of Berlin the increase in the number of motor vehicles for the year was only 6, or 0.2 per cent. Of the passenger vehicles, 14,046 were used for business or professional purposes and 13,771 as pleasure and sporting vehicles. During the year 5,686 motor vehicles passed the frontier for temporary use for touring purposes in the Empire.

That close system which is such a characteristic Teutonic asset, is revealed in the coupling of close figures as to motor accidents, with the number of vehicles in use. For instance, during the period of one year, in the province of Brandenburg, the ratio of accidents to machines was about 1 to 2, while in the Rhineland, there was only one accident to every 20 machines. In 95.5 per cent. of the whole number of 4,864 accidents recorded, the owner of the vehicle causing the accident was identified, and in 1,406 cases, punishment was meted to offenders.

Rambler Aims to Interest Doctors.

"There are two classes of automobile buyers," says the Rambler Magazine, editorially. "One class always buys a product that is either of unreasonable cost or very cheap in price. The other class always demands proof of worth, and that is the only true measure of cost." It is to the latter class that the efforts of Thomas B. Jeffery & Co. are being most strongly directed, and especially for the benefit of a strong contingent of that class, the "Physician's Number" of the magazine has just been issued. It is packed from cover to cover with relations of the experiences of a great number of owners who have employed their cars professionally, and found the service to be of advantage in their work. The contents carry conviction, and as the edition is to be distributed to 50,000 prospective owners, it is easy to imagine it may prove a remunerative as well as an interesting effort of publicity.

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TWO VALVES COMBINED IN ONE

New Foreign Motor with Novel Form of Valve Gear—Original Method for Securing Double Service.

Although there are many advantages connected with the use of the independent poppet valves which commonly are used in gas engine practice, it is evident that where it is possible to combine the functions of both the inlet and exhaust organs in one moving part, considerable advantage is likely to be gained, particularly if the combination be possible to effect without loss of efficiency, mechanical or thermal. In the telescopic valves which are featured in the construction of the Franklin motors this year, a very close approximation to this desideratum is obtained by the use of two concentric valves. A recent foreign design which accomplishes the distribution with the use of only one moving part, however, and which, for its specific purpose appears to be wholly practicable, is the valve gear employed on the R. E. P. motors, which have contributed to no small stir in the aeronautical world abroad.

The most striking feature of these motors, aside from their very light weight, and high ratio of power to weight, is the fact that they are built in V-formation, and of 5 and 7 cylinders, according to the power requirements of the flying machine they are to serve. Because of the rigorous demand for economy of metal in their construction, the use of the one-piece, double-service valves, is particularly noteworthy.

From the accompanying figures some idea of the method by which the double duty is secured, may be obtained. In Fig. 1, the valve is shown in the inlet position. It will be seen that its diameter is relatively large as compared with the cylinder bore, and that the casing or chest in which it works comprises two chambers separated by a horizontal wall, the upper being the intake, and the lower, the exhaust passages, respectively. The cap closing the central portion of the chamber, and also supplying the guide for the valve stem, is made with a depending sleeve, which comes down nearly to the level of the top of the combustion chamber, and is separated from the walls of the central chamber by a space just sufficient to admit the sleeve, which is the main characteristic of the valve itself.

The valve, which is made with independent head and stem, is composed of the sleeves mentioned, and a couple of flanges, the lower of which forms the valve proper and secures the intermittent closure of the combustion space. The sleeve is pierced by two sets of small circular ports, the upper row of which afford communication between the interior of the valve and the intake port. The lower row connects the interior with the combustion chamber simultaneously. The upper flange serves to exclude the entering gases from the exhaust port during the period of admission.

In the inlet position, as shown, the gases enter through the usual manifold connection at g, passing through the ports, h, to the interior, f, of the valve. Thence they pass downward as indicated by the arrows, and enter the cylinder proper through the

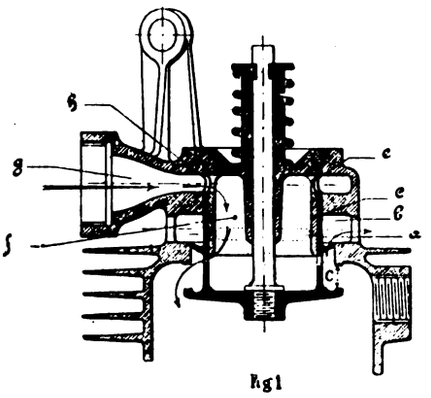


Fig 1

ports, c. During this interval, the flange, b, is seated in the cylinder opening surrounding the principal port, thus excluding the gases from the port, s, which surrounds the cylinder head and gives outlet to the exhaust through a series of small circular ports. In this connection, the construction of the valve sleeve and the closing cap, e, with its depending sleeve forming the valve seat or guide, is plainly shown.

At the end of the intake period, the valve is permitted to close to the full length of its travel, when the head, d, rises into its seat in the cylinder head, sealing the combustion chamber, as in Fig. 2. The openings in the lower part of the valve sleeve now register with the blank wall of the

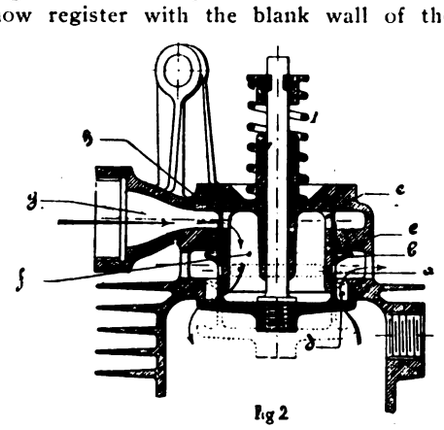


Fig 2

lower portion of the cap, e, while the ports, h, in its upper portion, are sealed by the same member. For the exhaust stroke, a slight motion of the valve, opens communication between the cylinder and the atmosphere through the large circumferential port, but excludes the fresh intake gases by reason of the registry of the ports in the lower part of the valve, with the lower part of the sleeve. The intake relation is again established by the complete motion of the valve to the lower end of its travel.

From this it will appear that the valve gear required may be essentially simple, the motion necessary for both intake and exhaust being merely the direct thrust common to all poppet valves, with the modification required to cause a dwell of one stroke in mid-travel. The principal advantages are that the combustion chamber is left perfectly plain, making possible a high compression, a simple casting, and a clean-working engine; that the exhaust gases have a free release and a short path to the atmosphere, in this case without the intermediary of an exhaust manifold or muffler; and that the passage of the live gases through the interior of the valve has a cooling effect upon it, as a result of which the cylindrical construction, with its considerable bearing area, is made possible. For the motor of larger size and more arduous service, it may be questioned whether such an arrangement would be entirely practicable. At the same time the suggestiveness of the system makes it well worth consideration with regard to its possible availability.

Waterproof Slip Covers for Cushions.

Slip covers for protecting the upholstery are an important adjunct to the car which is to be kept in good order internally, even though subjected to severe road wear. It is necessary that these coverings be of the right sort, however, if sufficient use is to be obtained from them to repay their cost. They must be cut to the exact shape and size of the cushions they protect, and they must be so contrived that they will go on easily, and without danger of stretching or tearing. The material should be reinforced with patches under each fastener, and the fasteners themselves should be not too bulky and of a secure type. For binding the seams, enameled binding leather is more suitable than any other sort, and further, possesses the advantage of helping to keep the material in shape. The goods employed for the purpose, should, of course, be of a serviceable, water proof variety.

Adaptability of Steel Belt Transmission.

Although the use of belt drive for motor car transmissions has entirely disappeared except in the case of one or two light vehicles at present manufactured abroad, it is possible that recent developments in the use of steel belting for transmission purposes in power plants may cast a new light on the matter. As a result of a series of exhaustive trials by a German firm, it has been found practicable to use steel for belting purposes with a remarkable degree of economy. It is stated that on account of the solidity and lightness of the metal, a belt of 1-6 the width of the common leather belt and of considerably less weight may be used. As it can be given considerable tension, the distance between the driving and driven members may be rigidly fixed, while centrifugal force and its effects are reduced to a minimum. The total power loss is claimed to be not over 1 per cent., while the slip is less than 1-10 of 1 per cent.

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APPEAL OF THE MOTOR BUGGY

How the Country Physician "Doped It Out" for Himself—Then He Got an Unpremeditated Demonstration.

How great is the attraction which the motor buggy holds for the man whose need of personal transportation over the highway is imperative, is not generally appreciated by those whose motoring experience is drawn solely from contact with the more elaborate and conventional types of vehicle. That it is based upon logical conclusions, must be evident from the very type of owner and prospective owner to whom this class of machine most appeals. In other words, to the man who requires a certain number of vehicle miles at the lowest possible cost, and whose use of the vehicle is to be largely a business one, the motor buggy appeals, simply because of its lack of superfluous details in any way, and its practical appearance. A valid consideration in this connection, which also carries great weight, is the fact that it is designed for a solid tire mounting.

Not infrequently it happens that interest in this type is developed in unexpected quarters. The experience of a local agent for a well known make of high wheeled machine is an interesting case in point. He was driving his demonstrating car on a 25 miles trip to a neighboring city. As he passed through a small town on his way, he noticed be was being closely watched by a man of studious aspect, who was standing by the curbstone beside a medium-powered runabout of conventional design. Looking back a few moments later, he was surprised to note that the same man had got into his car and was following only a short distance behind him.

"As the road was clear and in good condition, I 'let her out' pretty well," says the agent in question, "and though I knew about what the other machine would do, I was not altogether surprised that it did not pass me, even when it came up close behind once or twice. Finally, on a long down grade, it shot ahead, and I had expected not to see it again, when, much to my surprise, I found it waiting by the roadside in a village just at the foot of the hill, with its owner standing in the middle of the road and 'flagging me.' At first I was disposed to question his purpose, and had visions of local bailiffs and other unpleasant rural factors. But his first words checked all doubts on that score, without, however, enlightening me as to his purpose.

"'Are you in much of a hurry?' was his question when I stopped beside him.

"'No,' I said, 'not much.'

"'Because if you are not, I want to talk to you just a minute.'

"So I told him 'talking' was part of my business, and if there was anything in reason he wanted to talk about, I would be glad to accommodate him.

"Well, sir, it turned out he was a doctor, and lived back there in that little town, where he had a pretty wide-spread practice. Some two or three years back he had bought his machine, and was using it right along. But he had become interested in the high wheel proposition recently, and was anxious to talk it over with someone who knew all about it. So I told him I was just the man he wanted to see.

"It seems he had followed me all along just for the sake of observing how the buggy worked on country roads, and having stolen a demonstration as you might say, in this way, he was ready now to talk upkeep and all that sort of thing. He had no complaint against his own machine in any particular way, he told me, but at the same time he had come to the conclusion that it was not just what he wanted.

"'The great trouble is,' he said, 'that when I get a call in the middle of the night, I have got to waste time in pumping tires. This don't happen all the time, but it happens often enough to make me average just about as much time in getting away from the barn as though I had to stop and harness a horse. Then, too, there are times when a little more road clearance would add materially to my average speed.'

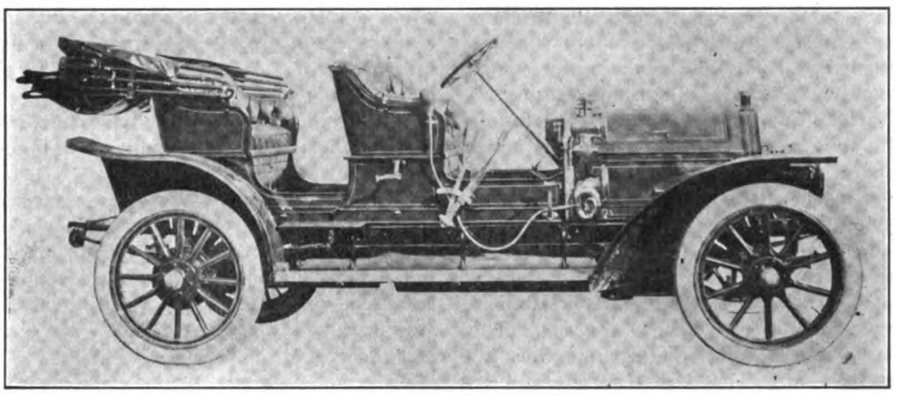
"More than that, he said he was using more car than he needed. He was sure there was more machinery and more weight to be handled, and consequently more expense in connection with its use, than was really necessary. He had about decided that the high wheel proposition was what he wanted to tackle, but he had had some doubts as to the way the high wheels would work on the road, and as to how much speed could be made without shaking the rig to pieces. That chase behind me had settled his opinion.

"And this, mind you," concludes the dealer, "from a man who has driven an ordinary light runabout for a good many thousand miles, and sober miles at that, and who had 'doped' out his conclusion without any help from anybody else."

DOUBLE RUMBLE WITH A TOP

The Thomas Tourabout a Compromise Between Runabout and Touring Car—Features of Its Adaptability.

In the development of automobiles the tendency of the times lies more in the line of refinement and simplification of body design than it does in alteration of the power plant. Probably the most striking change that is manifest in the outward appearance of a motor car is seen in the development of the rumble seat, which within the past year has attained a large degree of popularity. As the idea of the rumble found favor, the manufacturers of cars with this feature extended its scope by designing it for the use of two persons instead of one, and following the line of development still further, the next step was in the arrangement of a top for cars so equipped. With the addition of the top the development of this type of car seems to be complete. The rumble back differs from the touring body mainly in the absence of doors and in the lighter construction which is made possible because of this elimination.



THE THOMAS TOURABOUT

The latest car of the double rumble type is a very attractive model made by the E. R. Thomas Detroit Co. This car, which has been named the Tourabout, combines the lightness and speed of the Thomas runabout with almost the carrying capacity of a touring car, as shown in the accompanying illustration. A feature of this latest Thomas model is the case with which the rear seat can be removed and a single rumble, or a trunk substituted.

The power plant consists of a standard Thomas-Detroit Forty motor, of the four-cylinder vertical type, with cylinders of 5 by 4¼ inches dimensions, and three-speed, selective, shaft transmission. Timken roller and Hess-Bright ball bearings are used throughout except in the crank journals and on the connecting rods, where die pressed tin babbit bearings are utilized.

The Tourabout weighs about 2,400 pounds and is flexible and easy to control.

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RAN SECOND TO RIDERLESS HORSE

Automobilist Sued for Damages Nine Months After a Nine Miles Heat—Two Stories of the "Race."

A nine miles heat, said to have been made between Jeffersonville and Utica, Ky., in from 35 to 40 minutes, between an ordinary farm horse of mature years, and, as the complaint refers to it, an "Auto-Mobile," was the subject of a trial that has occupied considerable time of a jury in the Clark Circuit Court at Jeffersonville, Ky. The plaintiff was Fletcher Bushfield, a Utica township farmer, and the defendant, Charles C. Peel, who conducts a bicycle and automobile repair shop in Jeffersonville.

Peel owns a large car in which he frequently takes his family out for pleasure trips. One of these was made to Charlestown on April 27, 1907, and on the return voyage he "flushed" a horse belonging to Bushfield. The animal did not take kindly to the vehicle and with head and tail erect, started down the pike for Jeffersonville, nine miles distant. The race was an exciting one and along the line the people were notified by telephone of the novel contest. Many went out to see the race, but none attempted to stop the steed that persisted in keeping in front of Peel's machine. The horse finally ran into a Jeffersonville livery stable, still ahead of the automobile, having covered the nine miles, as alleged, in about forty minutes.

It was not until January 11, 1908, that Bushfield filed suit for $125 as damages, the full price of the horse. In his complaint, he alleged the horse was on a public highway when Peel came along in a large, powerful and rapid-geared "Auto-Mobile," causing the animal to take fright and run down the pike. It was alleged Peel made no attempt to stop the machine, but continued to chase the horse. By reason of the long run it was alleged the horse was made sick, sore, "staved up," rendered unfit for service and damaged in the sum of $100, judgment for $125, the true value of the horse being asked.

Some of the testimony was interesting, but the witnesses varied on the time the race took place. Some said it was 4 o'clock in the afternoon, while others fixed the hour at 6 o'clock. All of the witnesses for the plaintiff said the machine was "goins some"; so was the horse in keeping ahead of it. One witness testified that she had been notified of the coming of the horse and machine and went out to see the race. She said she would not make an attempt to stop the horse through fear she might be run over by the automobile on account of it going so fast.

When Peel was put on the stand he said he was delayed by the horse until an hour was consumed in making the trip. He said the beast would not turn to the right or left and that when the machine was slowed down to give the animal a chance to leave the road, he would not do so, but persisted in jogging along in front of the automobile. He said he used every possible endeavor to get the beast to leave the road, but he would not do so.

Automobiles Serve as Political Rostrums.

While automobiles long have been used by political candidates and spellbinders during the campaigns, the use largely has been confined to the service of transportation. Occasionally the motor car has been utilized as a platform from which to address gatherings, but it remained for Winston Churchill to discover the value of the top of a limousine as a point of vantage from which to appeal to his hearers for their support. During his recent campaign for a seat in Parliament, Churchill hurried from place to place in a car equipped with a limousine body. Instead of engaging halls in which to address the voters, Churchill pulled up at convenient street corners and mounting to the roof of the limousine, made his speeches from a decidedly advantageous standpoint.

Chicago politicians have gone even farther by equipping machines with speakers' platforms, for street metings. Four cars thus equipped convey Republican campaigners from point to point, the arrival at a speaking site being heralded with bugles and red fire.

Organized to Fight the Jersey Law.

In accordance with the determination to fight the amended Frelinghuysen law a committee representing the associated automobile clubs of New Jersey will make its first attack on the constitutionality of the license clause. The committee was appointed at a meeting of the Associated Clubs held May 7, at the New Jersey Automobile and Motor Club, Newark. W. C. Crosby, of that city, is chairman of the committee, which is authorized to secure counsel and begin proceedings at once. Sufficient funds have been assured by the different clubs that are affiliated with the State body and the best legal talent that is available will be secured. President George Paddock, of the New Jersey Automobile Trade Association, was present at the meting and assured the State body that the dealers would co-operate with the automobile clubs in the proposed fight.

Proposes High Tax on "Rubbernecks."

Running sight seeing automobiles will come high in Buffalo if the Doull ordinance providing for the licensing of them passes. The aldermanic law committee is expected to report favorably on the ordinance. It provides that companies operating such vehicles must maintain waiting rooms for passengers, and must not allow the sidewalks to be used for that purpose. The fee per year is based on the seating capacity—$1 per seat.

WOULD-BE PURCHASER IS SOLD

Bargain Car all Right in Down Hill Demonstration—Then Seller Gets Away with Cash Deposit.

Convinced that he was the one that was sold, and not the automobile that he bought, Frederick B. Drury, of Barre, Vt., made complaint to the Boston Police which had the effect of landing in the toils a young man named Paul C. Hersey of 3 Copeland street, Roxbury. The charge against Hersey, is specifically, larceny of $200.

Drury, it seems, thought he ought to have an automobile, and when he saw an advertisment that struck him as being a pretty good bargain, in he came to Boston to put through the deal. The bargain proved to be more than he bargained for. It took him to 18 Lynde street, in the West End, where he met young Hersey, and the machine. All three started out on a trial spin, after Drury had planked down the $200 as evidence of good faith. His own good faith seemed to be the only faithful part of the deal.

The machine went through its initial paces in right good style. It shot down the hill leading to Cambridge like a thoroughbred that had been cooped up in a stall for a week. When it struck the level, however, the car stopped, but Drury had no suspicion that all was not "on the level," even when Hersey requested him to stand by the machine until he, and his operator could return for some repair tools.

"You wait here until I return," said Hersey; but fortunately for Drury, he did not obey orders to the letter, else he might have been waiting yet, for that was last Tuesday and so far as is known Hersey had not returned up to Sunday morning. Neither had he returned the $200. Drury waited as long as he thought he ought to, then he concluded that he ought to report the automobile deal to the police.

Chicago Club to Aid Law Enforcement.

Good roads and the subject of scorching were thoroughly discussed by the board of governors of the Chicago Automobile Club at their regular meeting held May 8, and it was voted that Claude Seymour, A. R. Stumer, and T. J. Hyman should represent the club at the two days' convention to be held in Buffalo, N. Y. Discussion of scorching brought about a resolution which converts the club into a committee of the whole, each member being appointed a monitor to report cases of reckless driving to the board, which in turn will present the facts to Chief Shippy. It is noted, however, that the board makes a distinction between fast and reckless driving, the resolution defining reckless driving as "driving under conditions such as jeopardizes life, limb or property."

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EVOLUTION OF THE ELECTRIC

Churchward on the Advance in Motive Power Transmission and Control—The Reduction of "Wattage."

During the last two or three years, while the gasolene vehicle has been making tremendous headway and gaining rapidly in the popular estimation, the electric vehicle has persued a course which has been marked by nothing quite so much as by its even tenor. Because electrics have become wholly practical, and are operated with none of the formality which the highly paid attendant has impressed upon the average owner as being requisite to the other, their development has been accomplished with but scant attention on the part of those not directly connected with its production. The factors which have characterized this progress are briefly summarized by Alexander Churchward, whose connection with this branch of the industry has been intimate and of long duration; who also presents some valuable figures on the "wattage" of the present day vehicle, and the considerations which lead to its economy.

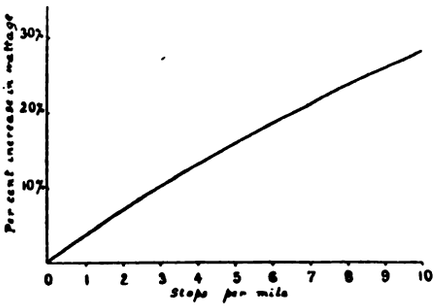
Nearly all of the earlier vehicles of the larger sizes were driven by motors mounted on the rear axle, the method of transmission being usually of the single reduction spur gear type, says Mr. Churchward. In the smaller sizes, such as runabouts, live axles with differentials and single motors were used. In the larger sizes two motors and dead rear axles were used.

The method of control adopted in these earlier types was what is known as the "commutated battery system," the controller changing the connections of various sets of cells from parallel to series, thereby varying the speed of the vehicle by varying the electro motive force impressed on the motor. The main advantage of this method of control was the unequal discharge of the different battery sets when connected in multiple. The mileage of these earlier vehicles was quite low compared with the results obtained from the same size battery to-day, the reason being that the friction, or in other words the "wattage," was excessively high.

It has been shown that motors mounted directly on the rear axle, are necessarily slow speed, comparatively heavy, the efficiency on overloads not high, and the transmission under average conditions not very efficient.

Next in order came the double reduction motor mounted on or suspended from the body of the vehicle, the power being transmitted from the motor countershaft or, in some cases, where slow speed, single reduction motors were used, from the motor shaft to the rear wheels by means of chains and sprockets. The vehicle efficiency of this type of transmission was found to be higher than the direct spur geared type, due to the increased flexibility in the driving mechanism, less weight on driving axle, better distribution of total weight, and the use of a lighter, higher-speed, and more efficient motor.

In 1903 one company placed on the market a new and lighter type of commercial vehicle, the principle features being: Net weight, approximately 0.6 of that of any vehicle of similar carrying capacity; flexible armored wood frame; single motor, roller chain drive from motor to countershaft; double chain drive from countershaft to rear wheels. Although this vehicle in the smaller sizes was capable of carrying nearly its own weight, it was found to be efficient and satisfactory in service. This was due to the great flexibility of the running gear and transmission. Such was the success of this type of vehicle that it proved conclusively that the weight could be reduced considerably in all types of electric vehicles, without impairing the efficiency or increasing the cost of maintenance.



Following along these lines, nearly all the standard vehicles to-day, with the exception of some few makes of the heaviest trucks, are equipped with a single motor and double chain reduction, but great improvements have been made by different manufacturers on this single motor type of vehicle. The first reduction roller chain has been replaced by a silent chain—the efficiency of the silent chain at high speeds being much greater than the roller chains. The plain bearings in the wheels are being replaced by some type of roller or ball bearing. Pressed steel frames for the smaller size vehicles and steel channel frames in the larger sizes are so designed as to retain the necessary flexibility and strength without increasing the weight.

Great strides have been made also in the design of motors especially suited to this single motor construction, the efficiency being increased on normal and overloads many per cent., while all unnecessary weight has been removed without impairing the steep torque characteristics so essential to motors taking their energy from storage batteries.

Another important advance has been made in the design of the controlling apparatus, which has been modified to suit the new conditions. The standard practice today is not to commutate the battery, but to combine the field windings of the motors, with proper shunting and thus obtain a greater number of speeds at higher efficiency that formerly. On all the older types of vehicles the controller used, opened the circuit between controller points, the result being arcing or burning of contacts, and expensive wear and tear on gearing, motor and tires. But in 1904 the General Electric Co. brought on a new controller, which obviated all of these troubles, and increased the mileage, life of tires and batteries.

This controller was so designed that the motor circuit was not opened in any point from the first to the last, the torque on the motor never falling below a certain predetermined value. It is known as the "continuous torque controller" and is applicable to both single and double motor equipments.

Much study has been given by vehicle manufacturers to the reduction of friction or wattage of their vehicles. A few years ago a commercial vehicle consuming 120 watt hours per ton mile on hard level asphalt was considered successful, but lately this limit has been reduced below 100 watt hours per ton mile, and in some cases, under favorable conditions, as low as 60 watt hours per ton mile.

Although the wattage of a vehicle on hard level asphalt cannot be taken as a criterion of what the vehicle will do in actual commercial service, yet it serves as a basis from which all calculations of mileage and traction can be made. The number of stops per mile has a great influence on the wattage of a vehicle, and as the mileage of any vehicle, with a given battery, is approximately proportional to the wattage, therefore the number of stops to be made will directly affect the possible mileage. The increase of wattage in per cent. due to stops is shown in the accompanying diagram.

The wattage is also influenced by the type of tired used. With solid tires of different makes the free running wattage may vary 10 to 15 per cent. on hard level asphalt, but the differences becomes less apparent on

Watt Hours Per Ton Mile.

Type of Battery. M V	50	60	70	80	90	100	110	120	130	150
			Ton Miles Per Hour.							
7	35	29	25	22	20	17.5	16	14.6	13.5	11.7
9	47	39	33	29	26	24	21.5	19.5	18	15.7
11	58	49	42	36	32	29	26.3	24.2	22.3	19.3
13	71	59	50	44	39	35	32	29.5	27	23.5
15	82	68	58	51	45	41	37	34	31.5	27
17	94	79	67	59	52	47	42.5	39	36	31.5
19	105	89	76	66	59	53	48	44	40	35
21	122	102	88	76	68	61	55	51	47	41

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grades or rough roads. How necessary it is to reduce the wattage per ton mile, of all vehicles that derive their energy from storage batteries is shown in the accompanying table, which gives the ton miles per hour capacity of a 44-cell battery at a 4-hour rate and with an average pressure per cell of 1.9 volts:

It will be seen from this that if a vehicle takes 120 watt hours per ton mile with a 21 "MV" battery, the ton miles per hour maximum are 51, while if the wattage is decreased to 50 watt hours per ton mile the mileage is doubled, or a much smaller battery, 11 or 13 "MV" can be used for the same distance to be covered. Thus by reducing the friction or wattage of a vehicle, a smaller battery can be used, a smaller motor, and the whole vehicle weight can be reduced.

The effect of different pavement and running conditions on this factor is further shown by a second table, giving the results of tests on a 1,000-pound delivery wagon of standard design:

	Max. Miles Per Charge.	Watt Hours Per Ton Mile.	Vehicle Speed MPH (Max.)
Level asphalt	57	80	10.5
Level macadam....	47.5	95	10
5 stops per mile.. Level macadam..	49	93	10.5
5 stops per mile.. Level asphalt....	41	110	10
10 stops per mile. Level macadam..	44	103	10.5
10 stops per mile..	37.5	122	10
Asphalt 1 % grade.	41.5	110	10.2
Macadam 1 % "	38	120	9.9
N. Y. City average 5 stops per mile..	41.6	109	10.2

On pleasure vehicles some form of pneumatic tire is nearly always used, and there is even a greater variation with different makes of pneumatics, than with solid tires. A vehicle equipped with a single tube cord tire will have a radius of nearly double that obtainable when equipped with a standard double tube tire. Several of the tire companies have designed a special fast low wattage tire, of double tube construction, for use on electric carriages, but, although the radius of action is nearly that of the single tube cord tire, the liability to puncture is as great.

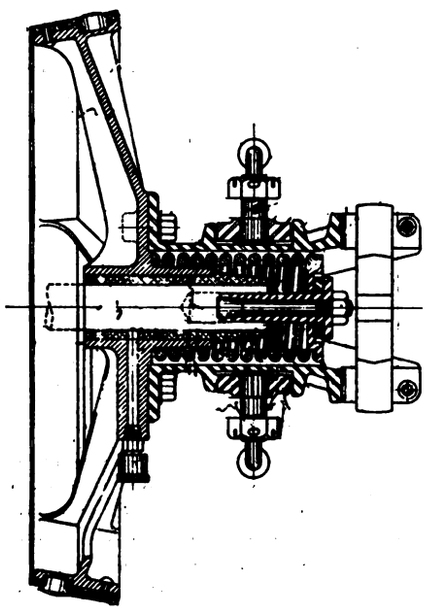
There has therefore been the choice between long mileage (per charge) and the liability to puncture and its attendant dangers, and short mileage and the comparative safety of a stronger tire. Lately a nonpuncturable inner tube has been brought out, and has been thoroughly tested. If this is used in conjunction with a special low wattage outer casing, we then arrive at the possibility of long mileage (per charge of battery) with a comparative safety and low tire maintenance.

From tests lately made, it would appear that the combination of this inner tube and a fast outer casing, does not increase the wattage perceptibly over that of the same casing and an ordinary inner tube.

REFINEMENT IN THE CONE CLUTCH

Light and Compact Construction of New "Long Arm" Model—Special Features in Conventional Design.

There is a certain comforting assurance of probable reliability in the use of any adjunct to the car which is known to have been designed along correct theoretical lines, and constructed in accordance with the best conditions of modern practice. On this account the work of the parts specialist may be accounted of especial value, since every article placed on the market is produced as a specific and not as an incidental effort. An instance in point is the "1909" model cone clutch, which has just been produced in early anticipation of the market by the "Long Arm" System Co., Cleveland, O. It is a compact and very light form of the conventional design. Yet being a special product, there can be no question about accepting it as a trustworthy component of the car.



In detail, the new clutch is much like the previous model. Its features include the large diameter and light, skeleton cone, with its standard angle of 10 degrees, its cork inserts, and friction material of a special grade of leather; its long center bearing, which prevents disalignment and consequent uneven engagement; and its variable tension device, which consists of a split, threaded bushing, which is locked by means of an expander bolt, when properly adjusted. The spring is of liberal size and enclosed, yet readily accessible for adjustment, and one fork of the universal joint is made integral with the driving sleeve, while the transmission is through a drop-forged center cross which is furnished with the clutch. Disengagement is secured through the use of hardened rollers, for which lubrication is provided, and in all other respects the main object of securing a high ratio of power capacity to weight and bulk have been subordinated to conditions governing efficiency of performance. The general arrangement is shown by the accompanying illustration, in which the construction is self-evident. Alterations in diameter, angle and friction surface will be made to specification on large orders.

The Principles of Valve Timing.

To the average motorist the mysteries of valve timing are of no particular interest. At the same time it is well for him to understand the principles upon which it is based, as well as the purely mechanical process by which it is accomplished, sufficiently well to be able to cope with the problem all by himself, should occasion require. In this connection, the most difficult point to understand is why the opening of the exhaust should be advanced, and its closing retarded. Considering the relative rate of piston travel at different points in the stroke, however, there is no real difficulty in understanding even this, as a foreign expert lucidly explains.

"Starting with the commencement of the suction stroke," he remarks, "it is obvious that there is very little downward movement of the piston at the commencement of the revolution of the crankshaft. Therefore, no suction can be set up until the crankshaft has gone through a certain angle (about 10 degrees). Thus it is of no use opening the inlet valve until 10 degrees past the dead center. Similarly no compression can take place until about 10 degrees past the bottom dead center, but the charge from the carburetter has been sucked in at high velocity, and therefore can keep flowing in under its momentum during that period when the piston is practically stationary at the bottom dead center. This accounts for the advantage to be obtained from the late opening and closing of the valves. The early opening of the exhaust valve has been often explained, but its late closing is not so apparent. As there is no longitudinal movement of the piston until 10 degrees after the dead center, and as the inlet valve is not opened until that point is reached, it is generally beneficial to keep the exhaust valve open until the piston starts moving down, so that the exhaust gases, which are under pressure, can be given every chance of escaping."

Naptha for Cleaning Upholstery.

Naptha may be used for cleaning the upholstery of the car when very dirty or greasy. If soiled only slightly equal parts of alcohol or salt and naptha should be used. The proportion should be such that when dissolved the mixture will feel gritty between the fingers. To use this, dampen the material with a sponge and brush over the dampened surface. The soiled spots will disappear and the material change to a fresh look.

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NEW YORK'S NEWEST MOTOR CAB

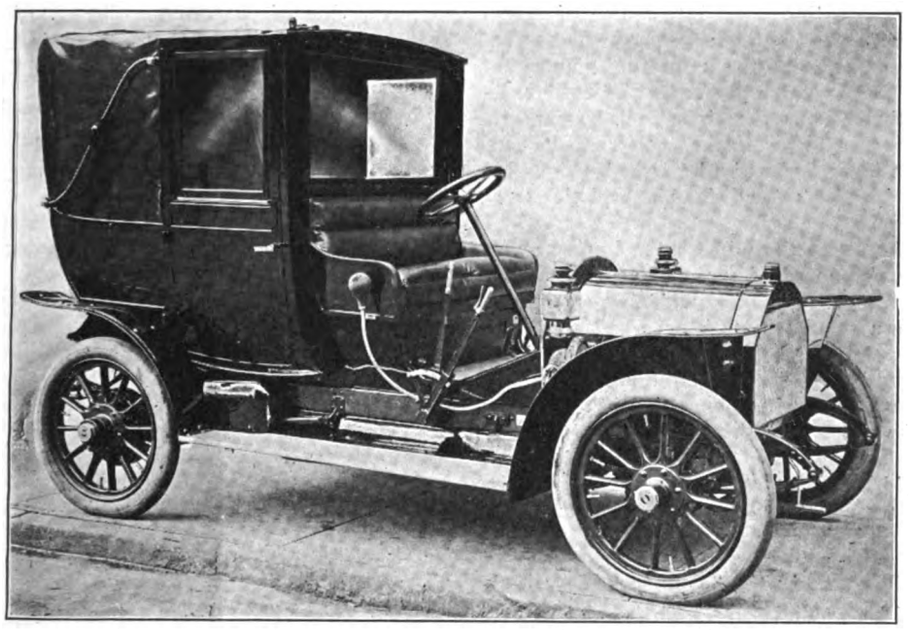
Characteristics of American Locomotive Model Adopted for "De Luxe" Hotel Service—Some Original Features.

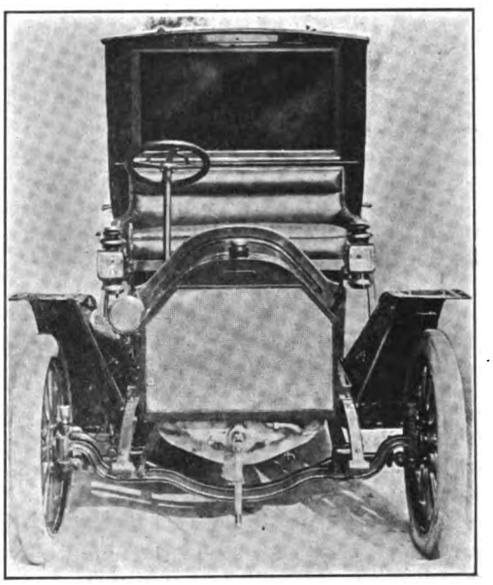
Probably the non-mechanical New Yorker has learned before this that the various types of motor cab now plying the streets of his city in taximeter service may be identified by their color, and has therefore assumed an air of great wisdom by his ready ability to name off the maker of any one of the several sorts now in service. To such a one, some little confusion is likely to result from the appearance of yet another color scheme on the streets, namely that of a dark brown body and yellow running gear. His anxiety may be set at rest quickly, however, by the statement that vehicles answering to this description are the very latest product of the American Locomotive Automobile Co.; that it is built in Providence, R. I.; and that the first hundred of the type are now being put into service, the initial instalment having gone into use last week at the Waldorf-Astoria Hotel.

For those who desire to go beneath the paint in learning to discriminate between machines of different makes but of the same general class, considerable originality will be found in the machine in question. It is built exclusively for cab service, and with this in view such points as facilitate interchangeability, prolong the life of the parts, and make the replacement of parts a matter of minutes rather than hours, have been given especial attention.

One of the most striking points in this connection is found in the fact that the motor, which is of the slow speed type, is limited by a governor to a rate of 800 revolutions per minute, that the spark regulation is fixed in so far as the operator is concerned, and that the machine is geared to a maximum vehicle speed on direct drive of but 20 miles per hour. The automatic limitation of the engine speed precludes the possibility of any "racing" beyond this rate, either in motor or vehicle.

Interchangeability, which has been mentioned as a distinguishing feature, is conserved by the use of front and rear axle, motor, transmission and steering groups, which may be replaced individually as required, without special fitting or alignment. In most cases, also, this may be done without dismounting either of the other organs from the chassis, or even disturbing them in their location.





SIDE AND FRONT VIEWS OF THE AMERICAN LOCOMOTIVE MOTOR CAB

The significant details of the vehicle are: motor, four-cylinder vertical; cylinder dimensions, 3 15-16 by 4¼ inches, bore and stroke; rated output, 16 horsepower; low tension ignition, with Simms-Bosch magneto; transmission, by multiple disc clutch, similar to those employed in the Berliet touring cars; three-speed, selective gearset, the third speed being direct, with a speed reduction of 3.8 to 1; shaft drive, and live rear axle; wheel base 103 inches; tread 55 inches, tires 32 by 3 inches, front and rear; height of frame from the ground, 24 inches; total vehicle weight, 2,600 pounds. Two sets of brakes are provided, as in all well ordered cars, the service set being of the contracting type, while the emergency equipment operates by expanding shoes against the interior of the same set of drums.

The most original, and from the designer's point of view, the most interesting feature of the chassis, is the rear axle and its anchorage. The bridge, or supporting axle is comprised of a one-piece drop forging, consisting of a large central ring, with tubular extensions at either end which form the housings and supports for the driving stubs. These extensions are ribbed to the central member in such a way as to secure the most desirable distribution of metal at every section. The spring seat and brake anchors are rotatively mounted in this member, their torques thus being transmitted directly to the frame members. The rear end of the driving shaft is carried in a housing affixed to the central body of the axle, and terminating in a torsion tube, which is attached to the chassis by a rotating yoke. The latter, by its method of attachment carries only torsional stresses, and allows the axle independent movement except in the radial sense, to which it is confined by the tube and also by a pair of radius rods which join the front side of the brake anchor with the frame, and which are articulated on the same transverse center of the chassis as the yoke supporting the torque tube. The live portion of the axle is of the true floating type, and the differential and bevel gearing is enclosed by a light housing attached to the axle, which carries no load. The wheels, of course, are carried on the ends of the axle tubes. An indication of the thoroughness and high class nature of the construction which is employed throughout, is found in the use of annular ball bearings on all journals of the transmission and running gear.

Like the chassis, the bodies are designed and built with special regard to the severe duty which is to be required of them. The woodwork is of seasoned ash, with sheet steel panels, the door mouldings and glass frame fences being of metal. The interior is trimmed with good vaneer, and the glass frames are of polished mahogany. The upholstery is of hand-buffed leather, and the door handles and other fixtures are of brass.

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SOLITARY COP OPERATES THE TRAP

Pelham Manor's Short Stretch of Parkway Costly to Motorists—How the System is Worked.

Because the village of Pelham Manor, just outside of New York City, purposes the erection of a new town building and "needs the money," automobilists passing through on Sundays are "trapped" with unfailing regularity on that portion of the Pelham Parkway lying within the village limits and the experience invariably costs them "$25 per." At least that is the view taken of the matter by people conversant with the situation. The village controls about 400 feet of the parkway just beyond the Hunter's Point Inn, on the main road from New York to Boston, its jurisdiction commencing at the top of the first incline past the Hunter's Island Inn and indicated by a signboard on the right side of the road. This signboard has recently been changed in that the speed limit is now 12 miles an hour instead of 4, as hitherto. Almost opposite the signboard is a lamppost and from this lamp a course measuring 110 yards has been measured on the sidewalk by the Pelham police, the finishing mark being on a telephone pole on the right side of the road at the foot of the decline.

On Sundays and when traffic is heaviest one lone police officer is stationed about 200 feet beyond the finishing line and it is upon his judgment of the speed that arrests are made. There are no police at the commencement or the finish of the trap. The road curves at this point and a shorter and somewhat dangerous curve is just ahead as the Travers Island club house of the New York Athletic Club comes into view.

The trap is in operation every Sunday afternoon and occasionally in the morning. The automobilists are arrested and taken up into the woods about a mile, held in cash bail for $25, and the trials generally are set for 6 o'clock on the succeeding Thursday evening.

In a recent trial where the evidence of the policeman was disputed the policeman swore that standing 530 feet from the starting point and 200 feet from the finishing point he could tell within six inches when the cars passed the imaginary line drawn at right angles to those points. The operator and his guest who was seated at his side both swore that their White steam car was going only 11 miles per hour by the speedometer that was in plain view of both, that they had slowed down upon seeing the sign previously referred to, that the power had been shut off and the footbrake set. The policeman, however, swore the car was going 25 miles an hour and that he had jumped on the running board while it was at that speed—a remarkable evidence of agility, if true. In spite of the facts offered in defense the usual fine of $25 was imposed. It is stated that the measurement of the course has not been checked and that the cop on duty there has not even measured it himself.

Women Establish "Free Rest Room."

As the citizen of the Bowery would say, "pipe" this sentence, from the Palmer correspondent of the Boston Journal, balanced as neatly as any juggler on the Poli circuit ever manipulated twenty cigar boxes, three billiard balls, a piece of chalk and a lighted lamp on top of a billiard cue reposing on his nose: "Henceforth the fame of the town of Palmer will be cherished in the hearts of automobilists as a green, breezy, rippling oasis in a waste of inhospitable burgs with many sassy youngsters shying rocks at the tonneau. squawking hens, lallygagging it across the road exasperatingly near the tires, and farmers retreating in terror to the shelter of the garret at the request of a bevisored, begoggled chauffeur for a 'wet' for his 'whistle' from the well.

"Thanks to the Old Center Improvement Club, composed of ten of the most estimable women of Palmer and always alive to modern requirements, a free rest room for automobilists, the first in America, has been opened here. There is no doubt that it will be popular, for from one end of the summer to the other a continuous file of whizz-chug cars keeps Palmer mummified in dust like an old lost masterpiece of Dante, and there is a perpetual yell from the tourists for a yank at a faucet."

Abilene Claims the "Youngest Motorist."

Infant prodigies make their meteoric appearance in every walk of life, and claims to the title of "youngest motorist" are by no means uncommon The latest claimant for that title is Miss Bessie Coulson, who will round out six years of her life time in June next. She is the daughter of Councilman E. E. Coulson, of Abilene, Kan., and he has so much confidence in her ability to operate his two cylinder touring car that when he reaches home he permits her to take it from the curb, around the corner, where, unaided, she turns and backs it through a narrow door into the garage. She drives through the streets with great skill, her father being with her merely to see that no mishap occurs, and she can bring the car to a stop at the curb as neatly as an experienced chauffeur could do it.

May Attire Motorcycle Cops in Khaki.

Toledo may set the fashion for rational dress for motorcycle policemen by adopting khaki uniforms for the motorcycle squad. The question came before the board at its last meeting and olive drab was the color most favored, as being less likely to show dust and oil spots as quickly as blue uniforms. The new motorcycles required for the use of the squad also were ordered purchased.

NEW DOCTRINE OF RESPONSIBILITY

Astounding Decision by a French Legal Tribunal—Innocent Man Convicted of "Involuntary Homicide."

That a driver may be held responsible for an accident caused by a vehicle following the one he is driving is the extraordinary legal doctrine set up in a recent decision of the Tribunal of Louviers, a French court. Under this decision a chauffeur named Pouget is adjudged guilty of "homicide through imprudence," and is under a sentence of one month's imprisonment and to pay a fine of 40 francs. The Touring Club de France has decided to appeal the case, which will be reheard before a higher court in Rouen. If such a decision should be allowed to stand, it is thought, the effect would be to make automobiling in France a matter of intolerable risk.

The case arose from an accident which occurred on August 20, 1907, when Pouget and another chauffeur named Fritz were taking to Dieppe two automobiles just purchased by Payne Whitney. When they reached the village of Pis Aller the car driven by Pouget was ahead and he successfully negotiated his way along a street encumbered by a grocer's handcart on the left in charge of a man, a two-horse wagon and a donkey cart on the right, and a dog in the middle of the roadway. Fritz, following Pouget at a distance of about 300 yards, ran over the dog, this accident throwing his automobile to the left, where it crushed the hand cart and killed the man attending it, while Fritz himself was thrown out of his seat, fell on his head and received injuries which resulted in his death that night in a local hospital.

At first an attempt was made to hold Payne Whitney responsible, but that failed and the authorities then proceeded against Pouget, accusing him of "homicide through imprudence," since he had led the way and was responsible for his comrade's attempting to follow. The Court of Louviers accepted this curious doctrine and declared that though Pouget was neither the author nor the accomplice in the death of the two victims, he was guilty of involuntary homicide in not protecting the grocer's man from the motor car following.

Home Made Automobile a "Scorcher."

A Sunday outing which Calvin Bangs of Everett and William Butler of Boston had planned to take in an automobile built by themselves and upon whose construction they had expended about $800, was prevented by a copper boiler exploding and demolishing the machine. Butler was sitting in the seat at the time, while Bangs was "firing up." In a twinkling the $800 and their labor "went to hell" as one of the men expressed it.

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The Week's Patents.

880,958. Multiple Cylinder Engine. Frank X. Bachle and John C. L. Kress, Clyde, Ohio. Filed June 13, 1907. Serial No. 378,691.

1. A multiple cylinder engine having its cylinders provided with pumping and combustion chambers, said chambers each having a port communicating therewith, a crank shaft and a rotary valve geared to revolve with the engine crank shaft and having a gas supply chamber and a gas distributing chamber, said supply chamber having ports arranged to register at different points in a rotation of the valve with the ports leading to the pumping chambers of the cylinders, and said distributing chamber having two series of ports, one series of which registers with the pumping chamber ports at different points in a rotation of the valve while the other series registers with the combustion chamber ports at different points in a rotation of the valve.

881,026. Spring Cushion for Automobile Tires. John P. Parsons and William Fleming, Pittsburg, Pa. Filed July 6, 1907. Serial No. 382,518.

1. A cushion tire comprising an outer casing inclosing a split annular frame provided with a circumferential recess, resilient means positioned in said recess, an outer split frame supported on said resilient means, an annular cushion carried by said outer frame, and means positioned within said annular frame for expanding and contracting said tire, substantially as described.

881,040. Compressor for Internal Combustion Engines. Harry W. Adams, Fargo, N. D., assignor of one-half to Philip W. Farnham, Fargo, N. D. Filed July 11, 1905. Serial No. 269,154.

1. A compressor having an inlet valve, a conduit for the delivery of compressed fluid, an exhaust valve controlling said conduit, a coil spring for normally holding the inlet valve in its closed position, and a movable member having one surface thereof subjected to the pressure of the gas in said delivery conduit beyond said exhaust valve and for increasing the tension of the spring and increasing the resistance to the opening of the inlet valve as the pressure within said delivery conduit increases.

881,058. Gas Engine Igniter. Albert N. Classon, Rutland township, Lasalle county, Ill. Filed April 20, 1906. Serial No. 312,800.

1. An ignition apparatus for internal combustion engines, comprising a magneto, an eccentric located upon the shaft of the armature thereof, a vibrator electrically connected to said magneto, binding posts oppositely disposed in the path of the vibrator, an eccentric rod connected to said eccentric and to said vibrator, and a condenser in parallel with said vibrator and binding posts, whereby the vibrator may be positively operated and an alternating current generated.

881,069. Engine Starter. Herbert P. Francis, Oroville, Cal. Filed April 20, 1906. Serial No. 312,806.

1. In an engine starter, the combination of a means for storing energy, a rotary shaft, means connecting it to the engine, a gear in connection with said means for storing energy, a gear in connection with the shaft, an independently rotatable member, a gear carried thereby, and means for arresting the movement of said independently rotatable member at will, said means being automatically controlled by the means for storing energy.

881,102. Anti-Friction Bearing. Walter C. Baker, Cleveland, Ohio., assignor to The American Ball Bearing Company, Cleveland, Ohio, a Corporation of Ohio. Filed April 2, 1906. Serial No. 309,387.

1. A wheel bearing and steering mechanism comprising balls, rollers, or other anti-friction devices, one of said anti-friction devices being located within the wheel hub, and within the line of the tread thereof, the other of said anti-friction devices being located inwardly from said wheel, said anti-friction devices being of different sizes, and the larger of said anti-friction devices being located in a line wth the traction and tread of the wheel, and a steering knuckle located between the two bearings.

881,122. Speed Mechanism. Frederick H. Hodgkins, Chicago, Ill. Filed Aug. 25, 1905. Serial No. 275,035.

1. In a speed mechanism, the combination of a hollow shaft, a slidable shaft in said hollow shaft, a friction member mounted on the hollow shaft and locked to the slidable shaft, driving members mounted on the hollow shaft at the ends of the friction member, each of the driving members having a seat and the ends of the friction member being shaped to engage the seats on the driving members, means for actuating said driving members, means for adjusting said slidable shaft to shift the friction member into operative engagement with one or the other of said driving members, and yielding means to move the friction member out of operative engagement with the driving members.

881,147. Heat Radiating Device. Julian L. Perkins, Springfield, Mass. Filed June 5, 1907. Serial No. 377,351.

1. The combination with the cylinder of a revolving engine, of heat-radiating ribs spirally disposed around the cylinder whereby air is directed around the latter to the rear side thereof, when the engine is running.

881,214. Explosive Compound Engine. Ellis J. Woolf, Minneapalos, Minn., assignor to The Woolf Valve Gear Company, Minneapolis, Minn., a Corporation of Minnesota. Filed March 2, 1907. Serial No. 360,148.

1. A compound explosive engine having its high pressure piston connected to travel in advance of the co-operating low pressure piston, and a charging chamber subject to compressing action of both of said pistons for forcing a charge into the explosion cylinder, substantially as described.

881,227. Anti-Vibration Device for Automobiles. Charles C. Dodge, Newark, N. J., assignor to The Dodge Lubricator Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 1, 1905. Serial No. 276,671.

1. An apparatus of the character referred to, comprising a cylinder, a support connected to the cylinder, means by which said support may be adjusted, a piston in the cylinder, bell-crank fulcrumed on said support and having relatively long and short arms, a piston rod, and means by which the cylinder and the short arms of the bell-cranks may be attached to two relatively movable parts of a vehicle.

881,248. Change Speed Gearing. Hubert Le Blon, Paris, France. Filed Jan. 31, 1907. Serial No. 355,044.

1. In combination, a driving member, high and low speed gears therefor, a driven member, a sleeve therefor loosely mounted

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high and low speed gears for said sleeve meshing with said first mentioned gears and provided with adjacent coupling members, an intermediate coupling member mounted on said sleeve, and means for shifting said sleeve to throw said intermediate coupling member into engagement with either of said loosely mounted gears.

881,273. Gearing. Charles Wicksteed, Kettering, England. Filed Aug. 9, 1906. Serial No. 329,937.

1. In speed gearing the combination of two clutches having a part movable axially into and out of engagement with its cooperating part, a rotatable operating shaft having two eccentric bodies thereon, means for operatively connecting one eccentric body with the axially movable part of one clutch in such manner that rotary movement of the shaft imparts axial movement to the clutch part, means for operatively connecting the second eccentric body with the axially movable part of the second clutch in such manner that rotary movement of the shaft produces axial movement of this second clutch part, substantially as set forth.

881,279. Carburetter for Internal Combustion Engines. Perry Allen, Flint, Mich. Filed May 31, 1907. Serial No. 376,533.

1. In a carburetter, a casing having an air passage provided with ports in both ends, a gate valve controlling the discharge port, a fuel supply pipe having a plurality of discharge ports facing the gate valve and under the control of said gate valve, a second valve controlling the quantity of fuel passing into the supply pipe, and means for connecting the two valves for mutual movement.

881,419. Valve Stem and Tire Deflation Alarm. Abbott E. Kay, Chicago, Ill. Filed Aug. 3, 1906. Serial No. 329,271.

1. In a device of the class described the combination with an inner tube of a stem rigidly engaged thereto and having its inner end approximately flush with the tube, telescoping tubes, one rigidly engaged in the stem and insulated therefrom, the other slidable therein, spring contacts carried by the movable tube adapted to bear against the rigid tube to close a circuit.

881,416. Carburetter. Charles Krebs, Newark, N. J. Filed April 12, 1907. Serial No. 367,820.

1. In a carburetter for gas engines, the combination with a gasolene holder, of a series of mixing tubes, each tube forming a mixing chamber, a feed tube connected with said gasolene holder, said tube extending into and diametrically across each mixing tube, said tube being provided with a series of outlets, each outlet establishing a communication with each mixing chamber of the respective mixing tubes, and means connected with each mixing tube having a portion in engagement with the outlets in said feeding tube for regulating the spraying of the gasolene from said outlets, substantially as and for the purposes set forth.

881,428. Engine. Charles V. Martin, Charleston, W. Va. Filed Feb. 26, 1906. Serial No. 303,036.

1. In a rotary engine, the combination with supports, of a fixed crank shaft carried thereby, a casing having ported inlet and exhaust hubs revolubly mounted on the shaft, an annular partition dividing the interior of the casing into a central crank chamber, and an annular compartment, cylinders supported by the casing and having their inner ends opening into the crank chamber, exhaust valve mechanism arranged in the annular compartment between the cylinders, there being ports or passages through which communication is established between the cylinders and the inlet hub and exhaust valve mechanism, respectively, exhaust valve stems extending into the crank chamber, and means arranged within such crank chamber for engaging and actuating said stems.

881,444. Power Transmission Device. Carl A. Schlachter, Rockwell City, Iowa. Filed June 24, 1907. Serial No. 380,550.

1. A power transmission device comprising a drive member, a vane drum fast thereon, radial seats formed in the drum, vanes in said seats, springs housed in said seats and tending to force the vanes outwardly, and connections between the vanes, and a common actuating member for said connections.

881,460. Magneto for Sparking Mechanisms. Harold H. Brown, Boston, Mass. Filed Feb. 14, 1907. Serial No. 357,380.

1. An actuator for magnetos comprising a revoluble armature-shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a device for temporarily obstructing the movement of said arm on said shaft and again releasing it; and means movable in the plane of the axis of said shaft for automatically effecting the cessation of such obstructing action when said shaft has reached a predetermined speed.

881,471. Method of Manufacturing and Assembling Ball Bearings. Ernst G. Hoffmann, New Rochelle, N. Y. Filed June 13, 1907. Serial No. 378,699.

1. The method of manufacturing a ball bearing which consists in forming uninterrupted integral inner and outer rings or race ways grooved respectively on the outer and inner circumferential faces to embrace the balls and prevent lateral displacement thereof when assembled, subjecting the body of the outer ring to an electric heating current while the working face thereof and the inner rings and the balls are maintained at a low temperature, moving the ring and balls relatively in the desired direction at the instant of maximum expansion to embrace or release the balls, and immediately cooling the outer ring to prevent the heating of its working face.

881,472. Power Transmission Device. Clarence P. Hollister, Pittsfield, Mass., assignor of one-half to himself and one-half to Herbert M. Stilson, Pittsfield, Mass. Filed Oct. 4, 1907. Serial No. 395,843.

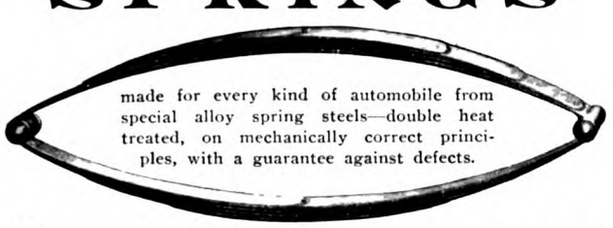
1. In a power transmission device in combination, a case fluid-filled and tight, a set of gears located in said case and connected respectively to the engine for power and to the running gear of the car or vehicle for transmission, means providing for and for regulating and controlling the movement of the fluid through the case or impounding the same, and so controlling the power delivered by the engine to and also the speed of the driven member, and parts providing for a frictional engagement or grip.

881,545. Power Transmission Means. John E. Caps and Arthur W. Caps, Kansas City, Mo. Filed Jan. 25, 1907. Serial No. 353,983.

1. In an automobile, a drive gear comprising a frame, a drive shaft, a sleeve loosely mounted thereon, a clutch adapted to hold said shaft and sleeve against relative rotation, a pair of sprockets rigidly mounted on said sleeve, a countershaft, a sprocket rigid therewith and geared to one of said sprockets on said sleeve, a sleeve loosely mounted on said countershaft, a plurality of sprockets carried thereby, a jack shaft, a sprocket carried thereby to which one of said sprockets on said sleeve is adapted to be geared, an idler disposed in bearings movable on the frame, a sprocket chain trained over said idler and over one of said sprockets of said first named sleeve being disposed in the path of and adapted to be engaged by said chain when said idler is moved in one direction and a clutch disposed on said countershaft and adapted to engage said sleeve thereon to hold same against rotation relatively to said shaft.

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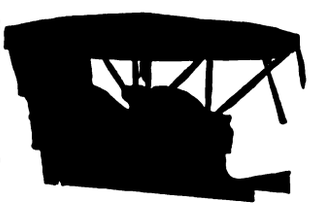
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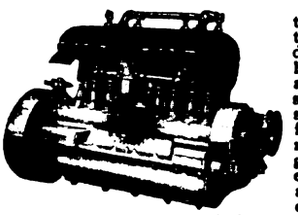
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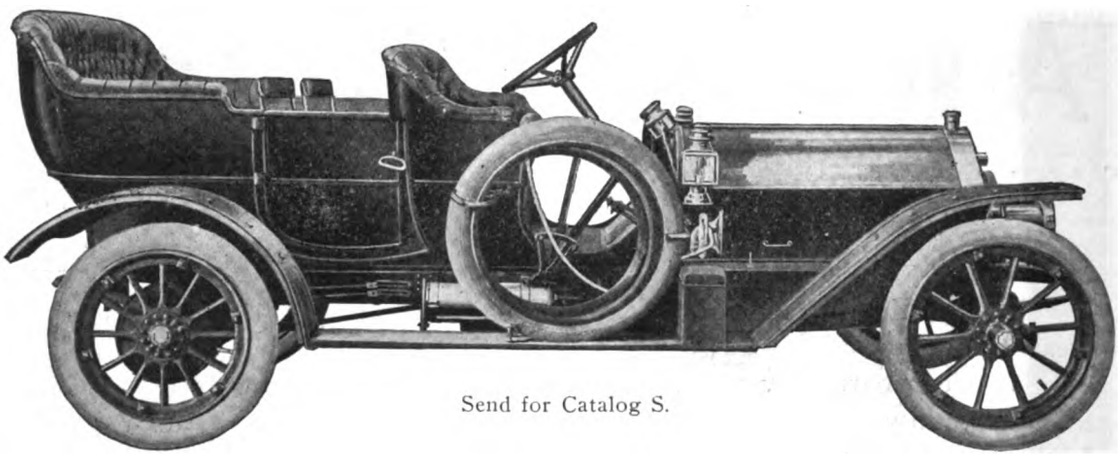
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You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.

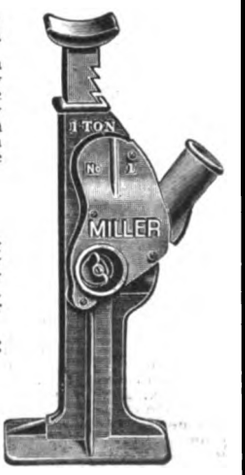


Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. **Price 60 cents per bottle.**

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. **The list price of the Miller Jack, $3.50 each.**



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Branches: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Broad St., Philadelphia, Pa. 227½-229 Jefferson Ave., Detroit. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo. 1392 Bedford Ave., Brooklyn, N. Y.

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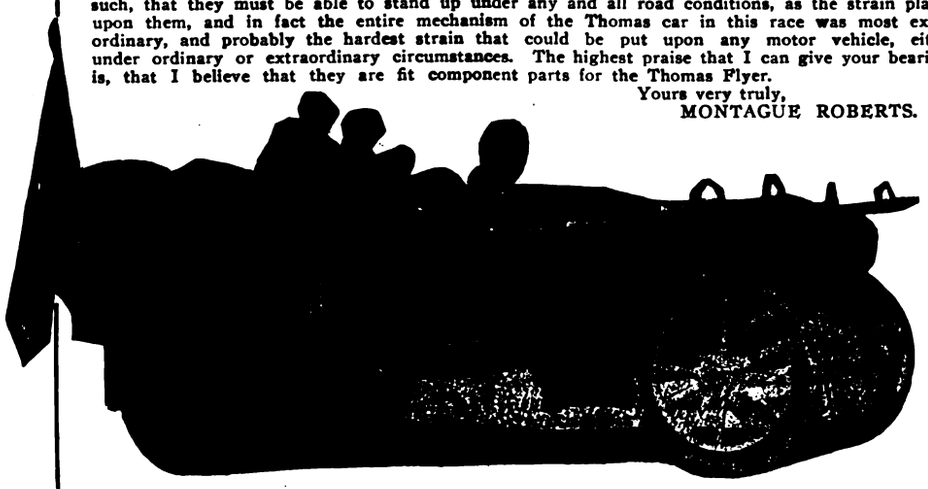
A TEST OF PRINCIPLE AND QUALITY

Probably one of the hardest tests an Automobile has ever been put to, has been met by the American entry, A THOMAS FLYER, in the New York to Paris Contest. The front wheels of this car are fitted with **Timken Roller Bearings,** the hardest service on a car for bearings—but up to the present time has given no trouble or needed any attention.

E. R. THOMAS MOTOR CO., Buffalo:

Gentlemen—It gives me great pleasure to inform you that the TIMKEN ROLLER BEARINGS which were used on the Thomas Flyer, which is America's entry in the International Race from New York to Paris, gave no trouble whatsoever from New York to Cheyenne, where I had charge of the car. I also believe that they have given no trouble since. These bearings, as you know, are placed where the greatest strain is on them, and it is a considerable pleasure to inform you that I believe the high quality of workmanship and material in your bearings is such, that they must be able to stand up under any and all road conditions, as the strain placed upon them, and in fact the entire mechanism of the Thomas car in this race was most extraordinary, and probably the hardest strain that could be put upon any motor vehicle, either under ordinary or extraordinary circumstances. The highest praise that I can give your bearings is, that I believe that they are fit component parts for the Thomas Flyer.

Yours very truly,
MONTAGUE ROBERTS.



TIMKEN ROLLER BEARINGS

are made to use on all roads, rough or smooth, and represent a special knowledge of load and tractive requirements, with a wearing quality impossible with any other form of frictionless bearings. And that is why over 60 per cent. of all the high grade American Automobiles and 95 per cent. of the Trucks made in this country recognize **The Timken Principle Correct and The Timken Quality Supreme.**

If you are building Automobiles or Trucks we would like to furnish you some data, based on facts that will not only interest you, but save you money.

The Timken Roller Bearing Axle Co.

CANTON, OHIO

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Matheson

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Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



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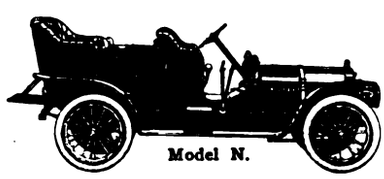
Dealers are wanted in all localities where we are not now represented.

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National Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with **Ball Bearings throughout, including the motor.**



Model N.

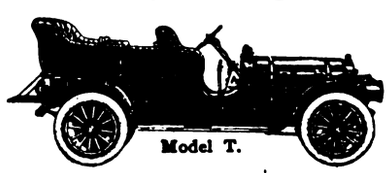
Model K - 4 cyl., 4⅞ x 5
$3,500

Model N — 4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x 4¾
$4,200

Model T — 6 cyl., 5 x 5
$5,000



Model T.

Write for particulars and our Booklet **"What Owners Say About Their Nationals."**

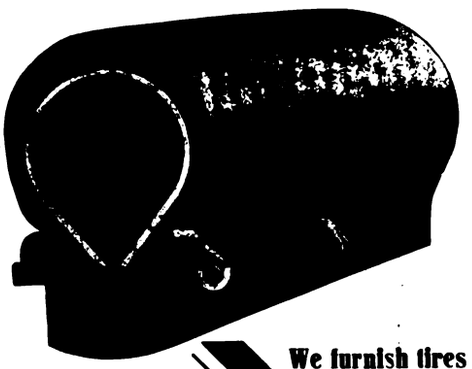
National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.

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to produce not the cheapest tires from the standpoint of first cost, but tires of the highest standard — tires that will by continued service prove the most economical for the user.



We furnish tires to fit any rim

"Firestone" Tires

"The Tires of Sterling Quality"

are made from the best materials — by the most skillful workmen — under the careful supervision and critical inspection of tire building experts. They embody the latest and best principles approved by modern tire building practice.

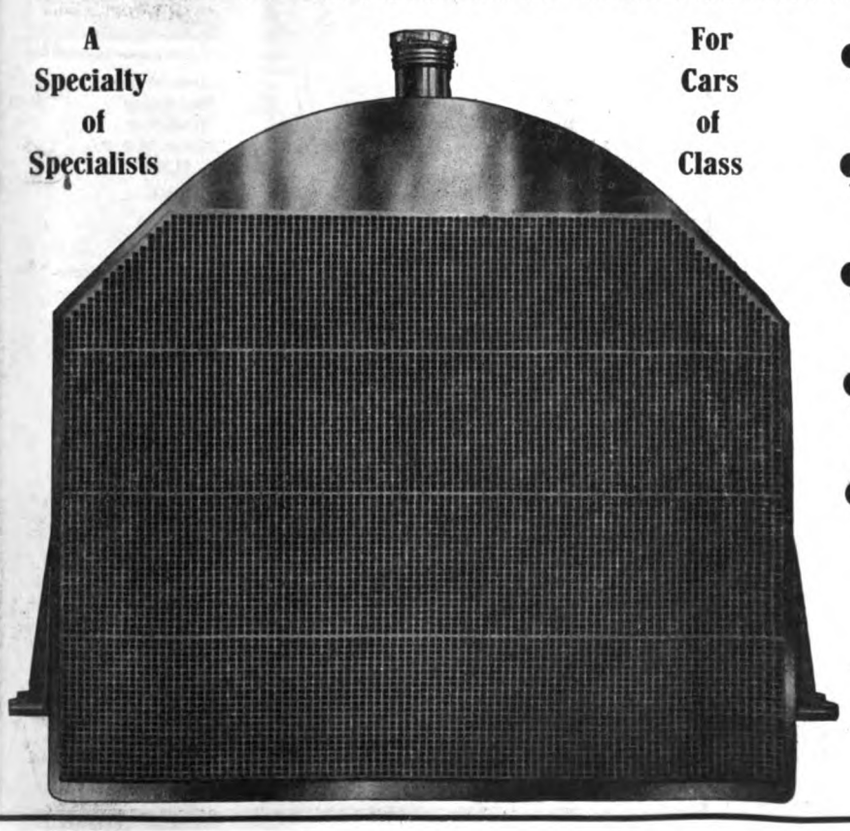
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A Specialty of Specialists

For Cars of Class



¶ Mayo Radiators sell on a strictly quality basis.

¶ They are not made, and will not be made, to conform to price.

¶ Hence, they are a fixture on most of the really high-class cars only.

¶ Contracts for next season's requirements are now being arranged.

¶ As quality-work is our specialty, quantity is limited, despite large facilities.

MAYO RADIATOR CO.

New Haven, Conn.

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THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



DOUBLE VICTORY IN HARRISBURG ENDURANCE RUN.

A 30 horsepower White Steamer was the only touring car to make a perfect score in the 320-mile endurance run of the Motor Club of Harrisburg, held May 4 and 5. The White was awarded the principal trophy, the Board of Trade Cup, and also the PATRIOT Cup for which four cars, including the White, tied in last year's contest. Three of last year's successful drivers competed with the same makes of cars in this year's contest and their relative performances decided the award of the 1907 trophy, the White, of course, being the winner.

The contest was run over the rough and hilly roads of eastern Pennsylvania. A 20-mile-an-hour schedule prevailed, with checking stations at intervals of approximately 30 miles. Each car carried an observer, and, in addition, all working parts were sealed. At the conclusion of the run the cars were critically examined by a committee of well known experts.

That the single White entry should have made the only perfect score in the touring car division is significant of the superior reliability and strength of construction of the White. The results of the Harrisburg contest, it should be further pointed out, were the same as in the memorable contest of the Quaker City Motor Club on January 1, 2 and 5, and in last year's struggle for the Hower Trophy, in that the single White entry proved triumphant over a large number of the leading gasolene cars.

Call and see the car in a class by itself

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. Boston, 320 Newbury St.
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(4) Durability

A lamp constructed with an unlimited amount of brass and a liberal use of solder is often held up by the unscrupulous dealer as a durable lamp for reason of its weight.

Solar Lamps are heavy, but have fewer parts and less solder than any other make. The Solar weight is in brass. Demand that your car be equipped with the accepted standard.

This important detail and all others explained fully in our new 1908 catalog. Write for copy.

Badger Brass Manufacturing Company

KENOSHA, WIS.

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Solar Lamps SHOW THE WAY

PALMER-SINGER

No. 14 **Palmer-Singer Six-Sixty. Runabout 6 Cylinder, 60 H. P. $2,850**

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All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Passenger Touring Car 40 H. P. $4,000



Palmer-Singer Town and Country Car 28-30 H. P. $3,000

Palmer and Singer Six-Fifty Racing Car, $2,450

The Six-Fifty is a gentleman's racing car—the fastest thing on the road—the snappiest thing on the market. It has all the appearance, the speed, the endurance of a Vanderbilt Cup racer and will be tremendously popular.

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The "Maxwell"

"When My Car Is In Condition,"

Protested a disgruntled driver when his machine had lost a hill-climbing contest to a lower (rated) power Maxwell—"when my car is in condition, I can beat you all right, all right."

The Maxwell man laughed. "I admit it," he said cheerfully—"At least, I would, if I ever saw a car of that make 'in condition.'"

I was only an innocent—though interested—bystander, so I held my peace.

But I thought, if the man who contemplates buying a car this season could appreciate, as I do, how much that controversy indicated as to the difference between Maxwells and other cars—why! we never could turn out enough to meet the demand even with the addition of our new ten acre factory at Newcastle, Indiana.

"When they are in condition," other cars sometimes defeat Maxwells—one never can account for the spectacular sprint of a "dark horse"—any more than he can depend on a repetition of it.

But the quality that I like in Maxwell cars—the quality that enables every Maxwell owner to wear a confident expression just before, as well as a contented one after, a contest—is that of consistency, certainty, dependability or whatever you may term it, that you can stake your life on.

Maxwell drivers have at their command a known quantity of power and performance and they can rely on repeating, at any time or place any performance done anywhere else with a Maxwell.

"It serves you right"—the Maxwell.

Benj. Briscoe
President.

MAXWELL-BRISCOE MOTOR CO.

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Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any $4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., $1900

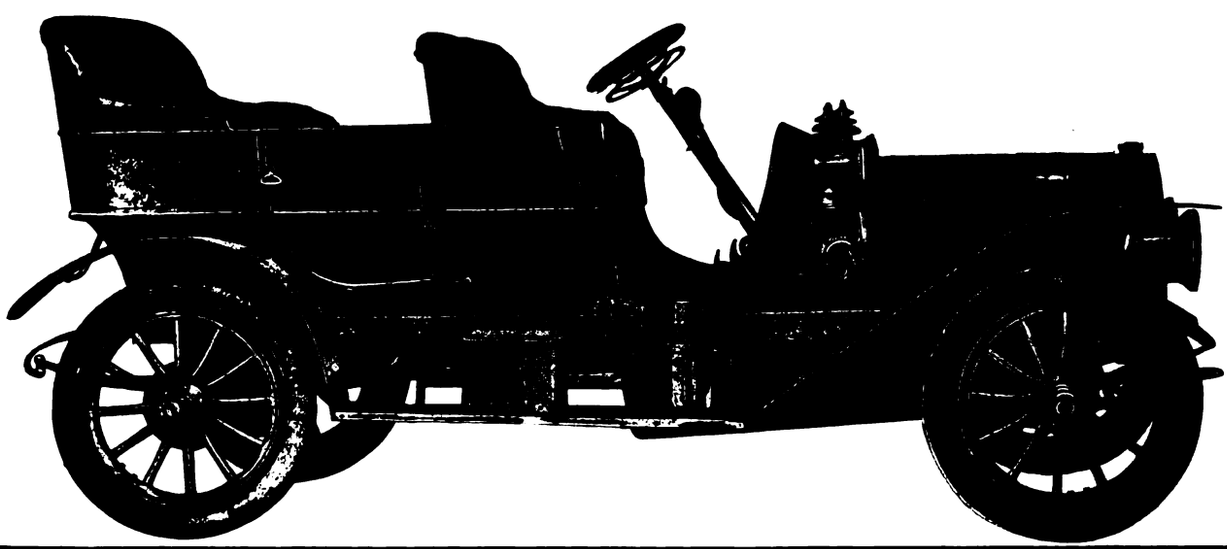
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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, May 21, 1908. No. 8

INJUNCTION WITH A STRING TO IT

Court Grants Badger's Appeal and Suspends the Rushmore Judgment—Wisconsin Badger not Involved.

Despite reports that the Rushmore Dynamo Works had obtained a preliminary injunction restraining the Badger Brass Mfg. Co. of New York from marketing the so-called flarefront type of lamp, it transpires that the injunction has a string to it, and as a matter of fact is not now operative.

When the motion for a preliminary injunction was granted in the United States Circuit Court for the Southern District of New York, the Badger company presented a petition for leave to appeal to the Circuit Court of Appeals and praying that the appeal be made a supersedeas. This petition Judge Lacombe granted and further ordered that the preliminary injunction shall not become effective until two days after the announcement of the decision of the Court of Appeals in the case of Rushmore vs. Manhattan Screw & Stamping Works.

The litigation, it is also made plain, involves only the Badger Brass Mfg. Co. of New York, and not the Wisconsin company, who it is authoritatively stated is quite ready to defend any suit that may be brought against them in any court to which they are subject.

Banker's Cash Capital 60 Cents..

Supplementary proceedings in the Chicago Debtors' Court on the 15th inst., developed indications that Albert C. Banker, once head of an automobile business in that city, no longer possesses the wealth which which once he was credited. The Curtin Supply Co. some time ago obtained in the Municipal Court, a judgment against him for $35, and the proceedings brought in the Debtors' Court were to elicit an explanation of why the judgment has not been satisfied. Banker scheduled his present worldly possessions as follows: Cash. 60 cents; souvenir watch, value 75 cents; two suits of clothes and one overcoat.

R. H. Smith Mfg. Co. Reorganizes.

Reorganization of the R. H. Smith Mfg. Co., Springfield. Mass., made necessary by the tragic death of R. Hale Smith, former president of the company, has been effected by the election of the following officers: President, Henry M. Smith; first vice-president, Arthur H. Rogers; second vice-president, Frank M. Chapin; treasurer, Henry T. Lorimer; secretary, Frank A. Wakefield. The company will continue without change of name to make Springfield motormeters.

Bondholders Buy Berkshire Property.

When the plant of the Berkshire Motor Car Co., Pittsfield, Mass., was put up at auction last week, it was bid in by a lawyer representing the bondholders. He paid $50 more than the mortgage of $28,000. This disposal of the property means that neither the stockholders nor creditors will receive anything, despite the fact that when the Berkshire company first got into trouble it was stated that the creditors probably would be paid in full. The liabilities amounted to $35,000.

Three New Men in Monarch Affairs.

At the annual meeting of the Monarch Cotor Car Co., in Chicago, last week, three new directors were added to the board, viz.: R. J. Gunning, F. A. Moody, and Rush C. Butler. The old directors re-elected were P. M. Hanney, Evan A. Evans, M. H. Kilgallen, and T. A. Quinlan, Jr. The directors in turn re-elected Mr. Quinlan president and general manager, and J. A. Ward, secretary and treasurer.

Chicago Printers Sue Electric Vehicle.

Two suits were filed in the Superior Court in Chicago on Thursday last to attach $16,725 of the funds of the Electric Vehicle Co., now in the hands of a receiver. The suits were brought by Rogers & Co. and the Long-Critchfield Corporation, both of Chicago, to collect money for printing catalogues and for advertising.

LOOKING FOR A BIGGER DIVIDEND

Pope Creditors Dissatisfied with Proposed Reorganization Plan—Likelihood of Amicable Adjustment.

Although the petition of the receivers of the Pope Mfg. Co. for authority to pay the creditors a dividend of 25 per cent. is before the courts, it transpires that the creditors do not believe the amount is sufficiently large. They are of opinion that the funds in the receivers' hands justify the payment of at least 50 per cent. of their claims and they are making an effort to obtain it. C. N. Gillett, cashier of the First National Bank of Chicago, who is secretary of the creditors' committee, and as representing that committee, has addressed the creditors with a view of achieving that end by bringing to bear united objection to a plan for the reorganization of the Pope company, which has been outlined by the stockholders.

It appears that a memorandum of this plan was submitted to the creditors' committee at a meeting held in New York on May 6th, which plan proved not satisfactory to the committee. It is understood, however, that within the last few days things have moved in a direction that presages an amicable settlement.

The plan provided for the raising of only $119,000, being an assessment of $5 per share on the first preferred stock, and the payment of a 25 per cent. dividend in cash and new obligations of the company for the balance of 75 per cent., payable in one, two and three years, with interest at 5 per cent.

In his address to the creditors, Secretary Gillett, of the creditors' committee, states the case in this language:

"The Pope Mfg. Co. now has on hand, in round figures, $900,000 in cash, applicable to dividends. By their auditor's figures they will have on hand by August 1, between $1,200,000 and $1,300,000. This has been gotten together by the sale of two

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properties in Chicago and from the result of their business generally. As the debts of the company approximate $1,600,000, it will be seen that these figures would permit the payment to creditors of 75 cents on the dollar by August 1, which would leave the properties at Hartford, Westfield, Hagerstown, Cleveland, and Elyria from which to realize, say, $300,000 or $400,000 more. This is outside the various other interests owned by the company.

"The committee is emphatically of the opinion that the money now on hand and in sight belongs to the creditors and should be disbursed to them at once unless a proper re-organization plan is presented by the stockholders, providing for the payment of a dividend of at least 50 per cent. to creditors immediately, and the payment of the balance in not more than two years, and providing further for the furnishing of an ample working capital by stockholders, say, $400,000. Anything materially short of this will amount to a great injustice to creditors under the circumstances of the case, unreasonably deferring their claims and exposing them unduly to the risks of the business. The committee has advised the stockholders through their counsel of its opinion as herein stated, and of its rejection of the stockholders' plans, so far as it is authorized to speak for the creditors on such a point.

"We are advised that the attorneys for the receivers will soon present a petition to the Vice-Chancellor at Newark, N. J., asking that the receivers be allowed to continue the business at Hartford for another year in the interest of the stockholders. Your committee proposes strenuously to object to this and asks for the support of the creditors before the court.

"The Vice-Chancellor has assured us that creditors will receive due notice before any order is made allowing the continuance of the business beyond August 1 of the present year. In all probability there will be an early hearing on the question, at which the committee expects to be represented by counsel and wishes to make a strong showing in behalf of the creditors."

Big Company Goes Bankrupt.

A petition in bankruptcy has been filed against the Empire State Engineering Co., with offices at 149 Broadway, New York, and works at 555 East 116th street, and at Rome, N. Y., by these creditors: National Brass & Copper Tube Co., $318; Henry F. Peake, $126, and Frederick M. Kreimer, $289. It is alleged that the company is insolvent and on May 12 allowed a city marshal to sell some of its property on an execution in favor of the De La Vergne Machine Co. The company was incorporated in March, 1902, with $500,000 capital, to manufacture electrical devices for automobiles and truck propulsion; over $100,000 was spent in machinery. The company has a large plant at Rome, against which bonds of $75,000 were issued.

The Week's Incorporations.

Los Angeles, Cal.—Fuller Motor Car Co., under California laws, with $75,000 capital.

Newark, N. J.—Automobile Equipment Co. of Newark, under Delaware laws, with $200,000 capital.

Augusta, Me.—Auto Livery Co., under Maine laws, with $75,000 capital. Corporator—J. Berry, president and treasurer, Augusta, Me.

Chicago, Ill.—Auto Taxicab Co., under Illinois laws, with $30,000 capital; general livery and garage. Corporators—C. E. Selleck, R. R. Howard, M. J. Isaacs.

Fort Collins, Col.—Hawthorne-Corbin Motor Co., The, under Colorado laws, with $6,000 capital. Corporators—W. A. Hawthorne, Franklin Corbin and H. W. Humphrey.

Denver, Col.—Wood, Erickson & Trimble Automobile Co., under Colorado laws, with $25,000 capital. Corporators—Thomas C. Wood, Louis O. Erickson, Clarence J. Trimble.

Rochester, N. Y.—Gearless Motor Car Co., under New York laws, with $300,000 capital. Corporators—William Bausch, George F. Roth, W. H. Rogers, John W. Brayfogle, and J. J. McInerney.

St. Louis, Mo.—Leader Mfg. Co., under Missouri laws, with $150,000 capital; manufacturing automobiles, motor vehicles, etc. Corporators—Frank D. Gildersleeve, Augustus Ross, John E. Tackabury, Henry W. Allen.

New York City, N. Y.—Benner Motor Car Co., under New York laws, with $40,000 capital; to manufacture automobiles, motor cars, etc. Corporators—A. J. Michelbacher, J. C. Welwood, R. P. Benner, New York City, N. Y.

Chicago, Ill.—Parmelee Taxicab Co., The under Illinois laws, with $250,000 capital; to operate a public motor cab service. Corporators—John J. Mitchell, John C. Shaffer, J. B. Wilbur, C. H. Randle, Norman B. Ream and others, Chicago, Ill.

Rome, N. Y.—Willex Mfg. Co., The, under New York laws, with $10,000 capital; manufacturing gasolene and oil engines and automobile and motor boat accessories. Corporators—Daniel B. Willex, John Willex, Christopher Schneiffer, Rome, N. Y.

Valley Stream, L. I.—Merchants' Long Island Delivery Co., The, under New York laws, with $4,000 capital; to transport merchandise by means of electric vehicles. Corporators—Frank Battenhausen, August Battenhausen, and Louis Roanes, Valley Stream, L. I.

In the Retail World.

A. A. Webber has taken over from James Cooke the Cartercar agency at Los Angeles, Cal. He will handle also the Harley-Davidson motorcycle.

Ortman & Hansel's garage on Market street, Stockton, Cal., was visited by fire May 7th, and although the building was saved two automobiles were destroyed and ten others were damaged.

The American Auto Co., of Cedar Rapids, Ia., have opened a branch office and garage at Iowa City. A repair shop is included in their new establishment.

That pioneer, George H. Lowe, has, with R. S. Crawford, formed the Lowe-Crawford Co., and opened salesrooms at 173 Huntington avenue, Boston. They will handle the Crawford car.

The Paxton Hardware Mfg. Co., of Paxton, Ill., has opened a garage and repair shop in the Cruzen building at East Pells street and Railroad avenue. They handle the Reo and Premier cars.

A new garage for the A. G. Randall Co., of Boise, Idaho, is under construction. The building is one story high and will afford ample room for a mechanical department as well as for garage purposes.

C. J. Durheim, conducting the Muskegon Bicycle and Auto Co., at Muskegon, Mich., is to have a new building two doors east of his present quarters on Clay avenue. It will be of brick with a frontage of 54 feet.

Under the name of the Earlville Garage Co., F. V. Dolder, G. H. Bernard, and E. J. Dolder, of Sheridan, Ill., have purchased the business of W. E. Angier. Hereafter it will be conducted as the Earlville Auto Garage.

A petition to have the Lakedel Auto Co., No. 5143 Delmar boulevard, St. Louis, Mo., declared a bankrupt, has been filed in the United States District Court. The petition alleges that the company has admitted its willingness to be adjudged a bankrupt.

Schedules in bankruptcy of the Kalb & Berger Mfg. Co., repairers, 530 East Seventy-second street, New York, show liabilities of $7,764 and nominal assets of $4,825, consisting of stock, $1,000; machinery, $2,458; accounts, $366; an automobile, $1,000, and cash, $1.

The Spear Auto Co., of Portland, Me., has been obliged, by the growth of the automobile interest in that city, to open a branch store and repair shop on the water front. They will give attention to the repair of motor boats, in addition to automobile repairing.

The Auburn Motor Car Co. is the most recent accession to Philadelphia's "automobile zone" on North Broad street. The company is composed of F. Liebfried, Jr., and Howard W. Trump. They have located at 441 North Broad street and will handle the Auburn car.

The Fred A. Bennett Automobile Co., of Spokane, Wash., is to have a new garage on Second avenue, between Post and Lincoln streets, a locality that is developing into an "automobile row." The building, which is being erected especially for their use, will be of brick, one story high and 142x50 feet in dimensions.

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LOBDELL AFTER A POPE INTEREST

Receivers Entertain Offer for American Wood Rim Shares—Court Hearing Set for That and Other Matters.

E. J. Lobdell, the head of the bicycle wood rim pool, is in a fair way of obtaining a splendid bargain. He has made an offer of $50,000 cash for the 1,465 shares of stock in the American Wood Rim Co., which are held by the receivers of the Pope Mfg. Co. and which have been carried on the books of the Pope company as of July 31, 1907, at $73,250. The par value of the shares is $100.

The American Wood Rim Co. is a part of the so-called Mutual Rim Co., which is the style under which the pool operates. It is a tight little combination which has kept up the price of bicycle rims despite the constant complaints of the bicycle manufacturers. It is practically a monopoly and it is understood that it always has earned a handsome profit. The combination is practically dominated by Lobdell.

Testifying that the Lobdell offer is the best that has been made for the 1,465 shares, the Pope receivers have asked the Court of Chancery of New Jersey for instructions as to whether or not they shall accept the $50,000. The hearing on the receivers' petition will be held in Newark Tuesday, May 26, at 10 a. m.

It is ordered that at the same hour creditors and stockholders of the Pope Manufacturing Company show cause why the petition of the receivers for leave to pay a dividend of 25 per cent. should not be granted.

The International Trust Company of Boston must also, at the same time, show cause why in declaring a dividend upon its claims, there should not be deducted the sum of $9,407.49. This company presented to the Pope receivers claims upon promissory note obligations, aggregating $75,000, which matured after the appointment of the receivers. At the date of the appointment the Pope Manufacturing Co. had $9,407.49 on deposit with the International Trust Co., which was not given up, on the receivers' demand.

Times Square Loses Its Suit.

The Bergen County (N. J.) County Court last week decided against the plaintiff in a rather unusual suit brought by the Times Square Automobile Co., of New York against the Rutherford National Bank. John Purdy bought an automobile from the plaintiff last August and gave a check of the Rutherford bank for $650. A representative of the company went to Rutherford the next day and had the check certified, but Purdy stopped payment, because the automobile he alleged, was not what was represented. The Times Square company maintained that the bank could not stop payment on a certified check, but the verdict upheld the bank.

Offer for Pope-Toledo Plant Declined.

Toledo has had another paroxysm. Some one named Apperson—not connected with the Kokomo Appersons—made an offer of $400,000 for the Pope-Toledo plant and the three receivers of the Pope Motor Car Co.—not excepting the Ohio receiver who was appointed at the instigation of disgruntled Toledoans—declined the offer. The Toledo folk who accuse the receivers of having no regard for their city or for the Pope-Toledo property, promptly "threw a fit." The trouble with the Apperson offer was that it was only a trifle of $200,000 less than the Schwab offer and, like the latter, was made in spoken words and not in writing; and even receivers cannot ask the courts to pass on verbal bids. Whom Apperson represents does not appear to be known.

Remington Stockholders Can't be Assessed.

After six years of complicated litigation, the action brought by the trustee of the long defunct Remington Automobile & Motor Co., of Utica, N. Y., finally has been decided in favor of the defendant stockholders who, by the decision, are relieved from the necessity of paying assessments on their stock holdings, as one of the several verdicts required of them. The history of the company and the story of its short life in Utica has been told at length during the many years that the company's affairs have been before the courts. The final chapter now is written as the Appellate Court's decision is against the trustee, and the time within which an appeal from this decision may be taken having passed, the matter is finally and definitely closed.

Royalty Reduction Case Aired Again.

Additional argument was presented in the United States Circuit Court at Trenton, N. J., on Monday last, 18th inst., on the petition of the receivers of the Electric Vehicle Co. to reduct the amount of royalty exacted of the licensees under the Selden patent, but no decision was rendered. The court took the case under advisement. The feature of the hearing was the appearance on the scene of Job E. Hedges, counsel of the American Motor Car Manufacturers' Association. He represented several minor creditors of the Electric Vehicle Co., and of course opposed granting the petition.

Lunch Boxes Emptied the Treasury.

The Atlas Mfg. Co., Hampton, N. H., which manufactured automobile lunch boxes, is in financial difficulties. Its schedule shows assets of $9,211.89, and liabilities of $13,745.

Tryon Named as Receiver for Martini.

James O. Tryon has been appointed receiver for the Martini Export Co., New York, against which, several weeks since, a petition in bankruptcy was fined.

ENGINEERS TO MEET IN CLEVELAND

What They will Discuss and Who will Address Them—Local Factories to be Visited and Inspected.

In accordance with the policy suggested at the meeting of the Mechanical Branch of the Association of Licensed Automobile Manufacturers, in Chicago, in December last, to the effect that the meetings be held at different points throughout the country, in order to give the engineers an opportunity to inspect and study the different factory methods of its members, the next meeting of the Mechanical Branch will be held at the Hollanden Hotel in Cleveland, Friday, May 22d.

The morning session will begin at 9 o'clock, taking up the subjects of proposed standard brake and clutch levers which has been given a certain amount of attention by the engineers and especially the test committee for the past three or four months. A full report of data gathered by the test committee relative to the dynamometer of the Automobile Club of America will be given and discussed. The report of the dynamometer tests is expected to contain some interesting matter. Papers on the two-cycle motor will be read by E. W. Roberts and A. W. Thompson, of the Electric Welding Products Co. will give an illustrated lecture on the advantages of combination valves, nickel steel heads and carbon steel ends. In the afternoon, and possibly the following day, the local factories will be visited and studied by the engineers in a body.

Trustee Chosen for Shoemaker.

At a meeting of the creditors of the Shoemaker Automobile Co., of Elkhart, Ind., called to elect a trustee, the Elkhart County Trust Co. was chosen for that office much to the surprise of the friends of Wilson Roose, the receiver, who also was a candidate. J. C. Fuller, representing the creditors quietly brought about the result, the vote standing 53 to 17.

McNevin Becomes Sales Manager.

Thomas H. McNevin, who has been acting as the Chicago representative of the Breeze Carburetter Co., has been called to the Newark (N. J.) factory where he will have charge of the sales department. Before leaving Chicago, he placed the Breeze goods with Fulton & Zinke, 1256 Michigan avenue.

Tire Manufacturers to Meet To-day.

A general meeting of the automobile tire manufacturers is due to occur in Cleveland to-day. Their object is to do something to remedy abuses which recently have arisen in the sale of their goods and caused a deal of friction.

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Oakland Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail light, generator, horn, tools, jack, pump and batteries. Top, $75.00 extra.
Runabout, $1,300.

Do You Realize What It Costs to Carry Dead Weight?

The man who parts with his good money for an automobile in these days is looking far beyond the first cost of the car. He wants in the first place to pay no more than a fair price for his car, but his real point of investigation is the cost of maintaining it after he has purchased.

The Oakland is made for this man.

It is designed and built for the man who runs but **one** car. It is made for the man who wants a car that is big enough to take his family out for a ride, and not too unwieldy for daily use about town when engaged in business.

It has all the power, style, and comfort which the exacting motorist is right in demanding, but the whole design and purpose of the car is to give the utmost value and the greatest service for the least possible expenditure.

How the Oakland Cuts Down Maintenance Costs

The Oakland car has been so refined in construction and design, with the number of working parts reduced to a minimum, but it **weighs from 500 to 1,000 pounds less than other two and four cylinder cars of equal horsepower.**

Aluminum is used freely throughout in its building, and it has less adjustments and working parts by over 50 per cent. than other cars of equal power and capacity.

The prompt and silent motor delivers through its straight line drive shaft full 20 horsepower to the rear axle.

The Oakland motor is a triumph of automobile designing—a two cylinder vertical motor that is perfectly balanced and free from vibration.

In appearance, performance, and cost, this is the car that most completely meets the demands of the discriminating buyer. It is an unusually good proposition for the better class of agents. Will you write to-day for further information?

OAKLAND MOTOR CAR CO., Pontiac, Mich.

SEND FOR NAME AND ADDRESS OF OUR NEAREST REPRESENTATIVE.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MAY 21, 1908

Concerning the Double Duty Valve.

It would be a tremendous improvement were it possible to construct a thoroughly practical motor in which the distribution of the gases, both intake and exhaust, was effected through the action of but a single moving part, and that actuated in the simplest manner conceivable. It is possible to bring this about in several ways, theoretically, and indeed, a number of different motors have been constructed in which such a single, double duty valve was employed. But for the sake of accuracy, it is still necessary to refer to the general scheme in the conditional or future tense.

The chief objection to the slide valve, which, in some one of its many forms is the only apparent solution of the problem, is the relatively great amount of surface exposed to the action of the heated products of combustion. This consideration is only partly masked in instances where large bodies of metal intervene between the gases and the surface of the valve. The friction resulting from the heat, naturally tends to cause seizure of the parts, and as the only offset to that difficulty which may be considered in a general way, is to provide ample clearance for the parts, the requirement of an absolutely gas-tight closure of the cylinder twice during each cycle appears to be unusually difficult of attainment.

At the same time, the performances of experimental motors which have embodied this feature or an approximation to it in the way of telescopic valves, and especially so in the case of the unique type of motor in which this is a present day commercial feature, leads to the hope that eventually something may be done with the problem, and that really practical results will follow.

For large motors, it is likely that independent poppet valves will continue to be used, as they are in some of the best-known types of high-speed, high-powered steam engines. But for the small motor of one, two or four cylinders, light, compact, and running with little or no attention from the user, the single valve is desirable above all. Only by its development can the four-cycle type of the future be expected to attain a footing of equality with the two-cycle in general utility, and the very attractiveness of its use should give sufficient impetus to designers to enable them to work it out in a satisfactory manner.

Dynamometers for Garage Use.

In the ambitious scheme of the English garage proprietors who have installed a car dynamometer to be used, among other things, in trying out cars which have been sent to them for repairs, manifested a degree of wisdom and enterprise as commendable as it is unexpected. The very idea, not simply of doing the work for which the owner pays, but of proving by accredited test methods that the work has been done properly is so novel as to be worthy of note. Further, it suggests the possibility of a more general application of the plan with very material profit.

The cost of a suitable dynamometer need not necessarily be by any means as great as might be supposed. Complicated integrating or other indicating apparatus is not absolutely required. Draw bar mechanism and accurate centering devices are equally needless where suitable methods of calculation and calibration are employed. In its most elementary form, a perfectly suitable dynamometer may consist of the traction rollers upon which the vehicle wheels rest, a power brake of some sort, weighing means for measuring the driving torque, and a speed indicator graduated so as to read in miles per hour car speed. Such an apparatus need occupy hardly more floor space than would be required for the storage of a large car, and requires no special location so long as it is accessibly placed.

As to the possible economy which its use might involve, there are the advantages of certainty in checking adjustments; the possibility of preserving a certificate of performance after repairs, where at present there is commonly only the word of the tester as to a road tryout; the facility with which faults may be located either before work is commenced or after it has been supposedly completed; the opportunity of making long test runs without subjecting the running gear and finish of the machine to road wear, and lastly, the opportunity afforded of having the testers always under the eye of the foreman, thereby eliminating time losses due to "punctures," for which may sometimes be substituted stops for refreshment.

The use of such a machine for experimental purposes in the event of a garage installation would be wholly secondary. Its commercial application would be of superior importance. Added to this, the advertising value of such an installation would be sufficiently great to make a reasonable outlay justifiable even though not repaid directly. The idea is one which does credit to its originator.

No garage is considered complete to-day without its elevators, fuel and lubricants dispensing pumps and other special equipments. It may be that some day the garage dynamometer will come to be considered an equally essential furnishing. Certainly if it does, the industry and its patrons will have gained a great deal.

Advantages of Moderate Power.

What may be looked back upon as the first real token that motor car designers were beginning to obtain a proper grasp of the conditions governing their undertaking was the controversy waged some three or four years ago over the proper relationship between vehicle weight and motor power. That many designers had not dreamed such a relationship existed up to that time is an inference forced home by an examination to-day of some of the pioneer models as well as of many others produced at a time when it was announced

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that the motorist in prospect need no longer wait for the perfect car. The immediate outcome of the movement of which that discussion was the outward indication was an increase in the ratio of power to weight which has continued up to the present time practically without interruption. Now it is evident that a backward swing of the pendulum is in order.

The high-powered runabout so prevalent to-day, represents an extreme which is, to put it mildly, unreasonable. There is absolutely no need of employing anything like one ton of car to transport two or three people over the common highways. Nor is the prevailing condition with respect to the powering of large touring cars much more rational. The average seven passenger touring car has more power than it requires except for very high speed traveling and for hill-climbing. It is designed to maintain a uniform rate of speed up hill and down. To do this it is necessary to employ a much more powerful motor than would be necessary were the owner willing to sacrifice a little speed on hills. In fact, it is the practice of rushing hills on high gear, and, too, of running at slow speeds on high gear, which has encouraged the makers to continue increasing the relative power of their motors.

In a recent statement, Howard E. Coffin, first vice-president of the E. R. Thomas Detroit Co., called attention to the wasteful tendencies arising from the practice of over-powering cars and pointed out that the maker desirous of building a car to climb any hill on high gear is confronted with two equally undesirable possibilities. Either the motor may be made sufficiently powerful to accomplish the desired result at the expense of a majority of service below its normal and therefore most efficient capacity, or it may be made more nearly in proportion to the power demands of the vehicle, but geared down. In this case, high running speeds are obtainable only at the expense of racing the engine. Both alternatives are thus wasteful of the mechanism, inefficient and unnecessary. To offset this tendency, he suggests the more general use of the gear changing lever, and for the manufacturer, the production of cars of more moderate power and more conservative power to weight ratio.

It is perfectly evident that for all practical purposes the large, high powered car is too expensive a luxury to be employed except for purely pleasure purposes. Just as soon as the utility of the machine is taken into account, the owner inclines to reckon the cost, whether it be relatively large or small according to his point of view. Taken in this light, the car of moderate power must be more economical to run, even as it is more economical to buy, because its motor is used under more favorable conditions, and because all its parts are subject to less severe stresses than obtain in the high powered high speed machine.

The intermediate type of car, as it may be termed, offers a solution of the transportation problem which is both cheap and efficient. It is sufficiently powerful to go anywhere, and to run at speeds which are as high as it is reasonably safe to go, when road and grade conditions are favorable. Its use requires a little more manipulation that is necessary with a machine built for abnormal service, but otherwise it is hardly to be considered inferior to it. Generally speaking, the time lost in climbing hills at slow speed is not of material consequence. This being so it would not be surprising to see an increase in the popularity of the type, nor a corresponding concentration of manufacturing effort upon it as industrial conditions become more settled.

According to a source not connected with his press bureau, Chairman Hower has let it be known that there will be something higher than Hower to govern the Glidden touring contest, i. e.: the Rules, with the capital R. But the difference between Hower and the rules is what few normal men can distinguish. The rules were written to fit the chairman, not to fit the contest. He is the Only Rule "up to and including the final award." If he will now say which one of the printed rules he means to permit to govern the contest he will remove much doubt and speculation. Can it be the one which says that the chairman may "alter, amend, repeal or suspend" any old rule at any old time that suits his fancy?

It is a good plan to watch the speed indicator for signs of decreptitude in the car. Also it is a good plan to watch the car for signs of decreptitude in the speed indicator. In other words, failure to develop the accustomed speed indication over a well-known stretch of road under normal conditions may indicate that the car is in need of adjustment. But this fact does not invariably indicate a fault in the car. Sometimes the indicator is at fault, sometimes the front tire is down. The discrepancy always should be subjected to close and thoughtful analysis.

COMING EVENTS

May 23, Albany, N. Y.—Albany Automobile Club's annual hill climbing contest up Menand's hill.

May 28, Cincinnati, Ohio.—Cincinnati Automobile Club's annual hill climb up Stanley hill.

May 29-30, Minneapolis, Minn.—Minneapolis Automobile Club's 144 miles endurance run.

May 30, Salem, N. J.—Salem Horse Show and Athletic Association's track meet.

May 30, New Bedford, Mass.—Hill climbing contest up Smith Mills hill.

May 30, Denver, Colo.—300-miles road race for stock chassis.

May 30, Boston, Mass.—Bay State Automobile Association's race meet at Readville track.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio.—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

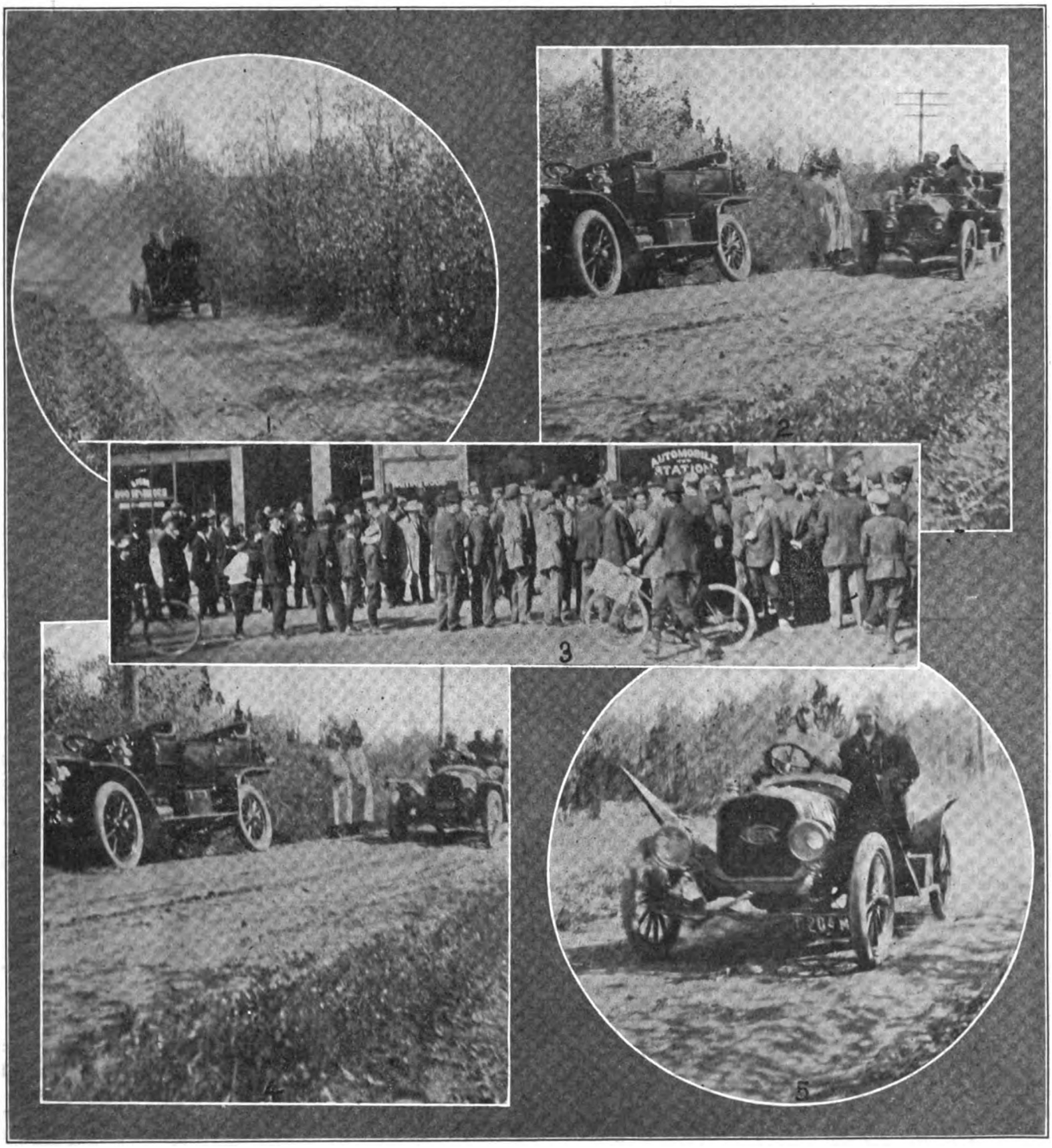
June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

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Sixteen Perfect Scores in Hartford's Big Endurance Run



1. ON THE ROAD BETWEEN MIDDLETOWN AND MERIDEN. 2 AND 4. VIEWING THE CONTEST FROM THE ROADSIDE.
3. THE CONTROL AT MIDDLETOWN. 5. THE CORBIN ENTRY.

With 50 entrants, 47 starters, 39 finishers and 16 perfect scorers, it might properly be said that the endurance run promoted by the Automobile Club of Hartford over the Hartford - Middletown - Waterbury - Farmington course on Saturday last, 16th inst., was the biggest event of its kind ever held in America. It is safe to say that no other endurance run has attracted the great throngs of spectators that congregated at all the towns, cities and villages along the 87 miles course, which had to be covered twice by the competing cars. A careful estimate places the crowd at 200,000 persons, and the interest and enthusiasm which the event aroused among every class of people along the route was only less remarkable than the number and importance of the entrants and starters.

Forty-seven of the original 50 entrants got away from the Allyn House, Hartford, at intervals of two minutes, the first car being dispatched at 7 o'clock. The arrangements were perfect and with one exception

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the same careful attention to official details marked the run throughout the day. The course was divided into six sections under that many controls, one point being deducted from an original score of 1,000 points for each minute in excess or behind the schedule time. Involuntarily stops for repairs or otherwise were charged accordingly, and tire trouble also was counted, which played havoc with several scores.

The bumptiousness of a young official at Middletown was the only disagreeable incident of the run. According to three watches that were set to official time at the start George W. Bennett, of New York City, drove his White car up to the Middletown control at exactly 41 minutes after he had left Hartford, the allotted running time for that section of the course being 40 minutes. The young official claimed that Bennett arrived in 39:30, and instead of reporting it to the officials at Hartford he constituted himself referee and "disqualified" the New York entrant. More than that he tore the official numbers from the bonnet of the car, so that it was useless to continue without that means of identification. The incident was greatly regretted by the officials of the Hartford club when they heard of it.

The course and the minimum time for covering each section was as follows: From Hartford to Middletown, 15 miles in 40 minutes; to Southington, by way of Meriden, 15 miles, 40 minutes; to Waterbury, 11 miles, 35 minutes; to Bristol, by the way of Thomaston, 17 miles, 50 minutes; to Farmington, 14 miles, 40 minutes; to Hartford, via Avon, 15 miles, 50 minutes, passing the starting point and continuing on the second round for a total distance of 174 miles, which called for a minimum time of 8 hours 30 minutes.

The great crowds that lined practically the entire course was the brilliant feature of the run. Usually people—those not directly interested—do not take much interest in watching cars roll by on schedule time. Not so, however, the Connecticut people. Everybody had a list of the cars and their numbers and kept tabs on the contestants as they passed. Thousands lined the streets in Middletown, Southington, Waterbury, Bristol, Farmington and Hartford, where the controls were located, while the Southington and Avon mountains were favorite sites for watching the work of the cars. These two inclines, with the Halcott mountains between the Farmington mountain and Hartford, were real mountains—not hills. It was fortunate the weather was perfect and the roads excellent or there may not have been so many perfect scores.

Although the run itself was completed by 5:30 o'clock Saturday afternoon, it was not until Sunday night that the real outcome was known. After all the cards had been checked up and figured out it was found that 16 drivers had covered the 174 miles without a count against them. As the Albert M. Kohn trophy for the car costing more than $1,500 making nearest to a perfect score, was won by 15 cars, the little Maxwell being the perfect scorer not in this class, the 15 drivers will have their names engraved upon it and be awarded certificates, the trophy remaining in possession of the club. The following drivers and their cars finished with perfect scores:

Joseph Watson, Corbin; Peter Robinson, Stevens-Duryea; V. A. Charles, Rambler; C. M. Wright, Stoddard-Dayton; S. H. Hancock, Stevens-Duryea; Frank Dunnell, Ford; B. F. Smith, Mitchell; Stanley Goss, Corbin; C. P. Hulst, Thomas-Detroit; John B. Burrall; Packard; D. C. Lull, Pierce; A. B. Barkman, Maxwell; J. J. Shea, Thomas Flyer; W. A. Burke, Knox; Claude Pinney, Maxwell, and J. M. Macdonald, Maxwell.

Macdonald's Maxwell was the big winner of the day, getting two cups—the Hartford Rubber Works Co.'s cup for the car costing $1,500 or less making the nearest to a perfect score, and the G. K. Dustin trophy for the most consistent work of any car regardless of the price or size. This was determined by a vote of the observers and they had a good chance to judge as they were transferred to different cars at each control, so that each car had at various times twelve observers. In the plebescite the little Maxwell received eight votes, T. F. Garvan's Pope-Hartford six, the Thomas-Detroit five, and the Locomobile and the Thomas Flyer had four each.

Three cups were awarded to the cars consuming the least amount of gasolene. In the class for cars under $1,500, the Ford, driven by Louis Elmer, won with a total consumption of 9 gallons 2½ quarts. In the class for cars between $1,501 and $3,000 the cup went to Burke's Knox, eight gallons 2 quarts. Robinson's Stevens-Duryea, with a consumption of 11 gallons 2 quarts, won the cup in the class for cars costing more than $3,000. Not all the cars entered the gasolene consumption test, the following summary showing the name of the car and the amount of gasolene consumed:

Cars costing $1,500 or less, Ford, 9 gallons 2½ quarts; Buick, two-cylinder, 11 gallons 2½ quarts; Overland, 11 gallons 2 quarts.

Costing from $1,501 to $3,000, inclusive: Franklin, 13 gallons 3 quarts; Corbin, No. 3, 12 gallons 3 quarts; Stoddard-Dayton, 12 gallons; Rambler, 16 gallons 3 quarts 1½ pints; Rambler, 21 gallons 1 pint; Rambler, 15 gallons 2½ quarts; Knox (air cooled), 15 gallons; Stoddard-Dayton, 14 gallons 1 quart; Mitchell, 17 gallons 2 quarts; Rambler, 12 gallons 2 quarts; Pope-Hartford, 15 gallons; Olds, 13 gallons; Pope-Hartford, 11 gallons 2 quarts 1½ pints; Knox, 15 gallons 3 quarts; Corbin, 10 gallons 1 quart 1½ pints; Thomas-Detroit, 11 gallons; Knox, 8 gallons 2 quarts; Buick, 7 gallons 2 quarts.

Cars costing over $3,000; Stevens-Duryea, 11 gallons 2 quarts; Thomas Flyer, 21 gallons; Stevens-Duryea, 11 gallons 1 quart; Packard, 14 gallons 3 quarts; Pierce Arrow, 24 gallons 1 quart 1½ pints; Columbia, 14 gallons; Locomobile, 17 gallons.

Of all the penalized cars there are two cars that deserve praise and consolation, and they are, strange to say, the cars which received the least and the greatest penalty, being, respectively, Fred W. Dart's Thomas Flyer and John E. Lertz's Cadillac. Dart made a good run all the way, and was on time at all the controls, but stopped his engine for a fraction of a second in changing gears on a hill. The Cadillac was the only single cylinder car in the run and made a perfect score until within ten miles of Hartford on the last round, when a spark plug broke and it was put back hopelessly. The penalties of the cars were: Robert R. Asheville, Franklin, tire trouble, 8 points; Peter Corbin, Jr., Corbin, carburetter trouble, overheated engine, changing spare plug, 13; L. H. Elmer, Ford, stalled motor, 1; R. L. Lockwood, Reo, out first control; Harry Tuttle, Stoddard-Dayton, tire and commutator trouble, 19; F. E. Bowers, Rambler, motor stalled, 1; H. M. Turrell, Rambler, stop on Vanderbilt hill, 2; S. A. Miner, Knox, tire trouble, 13; Robert S. Miner, Buick, changing spark plug, 2; A. E. Lazaro, Jr., Compound, out first round; Fred W. Dart, Thomas Flyer, motor stalled, 1; A. W. Peard, Overland, stop for water, tire trouble, cylinder trouble, 58; Elmer Seymour, Thomas Flyer, out third control; George W. Bennett, White, "disqualified" at first control; Samuel E. Campbell, Rambler, tire trouble, 42; Harold G. Green, Pope-Hartford, tire and motor trouble, 30; Ariel Mitchelson, Cadillac, out on second round, tire trouble; Dean Danken, Peerless, engine and tire trouble, 62; C. P. Hulst, Oldsmobile, tire trouble, 9; T. F. Garvan, stalled motor, 1; J. C. Corbett, Corbin, out on second round; J. W. Llynch, Knox, motor stalled and spark plub, 4; John J. Coffey, Columbia, out on second round; John E. Lertz, Cadillac, spark plug, 182; F. W. Ruggles, Atlas, tire trouble, 17; H. R. Coffin, Columbia, water connection, 1; Frank Zerber, Mitchell, throttle stuck, 5; F. W. Belcher, Locomobile, tire trouble, 4; Gregory S. Bryan, Oldsmobile, out on second round.

Strang Sails to Race in France.

Lewis Strang, who will drive the Thomas car in the Grand Prix race, and W. K. Knepper, his mechanic, sailed yesterday on the Adriatic for France. With them were Edward Young and a staff of four assistants to look after their interests in the big race. Harry S. Houpt, who entered the Thomas car, accompanied them. Knepper, who acted as Herbert Lytle's mechanic in the Bennett cup race some years ago, was engaged at the last moment to replace John B. Margin. The latter had been Strang's mechanic in the Savannah and the Briarcliff races and was booked to act in the same capacity in the Grand Prix, but is out because of some misunderstanding.

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RAIN SPOILED CHICAGO'S CLIMB

Caused Third Postponement After Four Algonquin Records had been Slashed—Next Attempt August 14th.

Big slices were cut from four records before Jupiter Pluvius put a third crimp in the Chicago Motor Club's annual hill climb at Algonquin, Ill., on Monday last, 18th inst. Previous to the deluge, the officials sent up G. F. Sulzberger in his Stearns six and the millionaire packer ascended the hill in 25⅗ seconds, slightly disfiguring Leland's record of 26⅕ seconds.

Illinois's god of rain evidently suffered from acute indigestion all last week and part of this week. He showed his ill nature by spouting rain on Friday, the original date, and to placate him the club decided to hold over the events until Saturday. On Saturday, however, he was in no better humor and the contest went over to Monday. Monday was a little better. The day opened favorably enough, but by the time seven of the eleven events had been held on Perry hill, the shorter and steeper incline, it commenced to pour, and by the time the storm was over at 11:30 o'clock the hills were in such condition that the committee finally told Pluvius to gotohellorsomeotherplace forallthey cared and postponed the climb until August 14th. By that time it is hoped he will have recovered from his attack of dyspeptic acerbity. Four events on Perry hill and the entire eleven events up Phillips hill, the longer incline, remain unfinished.

Discontent sprang up in the ranks of contestants after the third postponement had flashed over peaceful Algonquin. Over half of the eighty contestants who had bided their time patiently since last Thursday to show the qualities of their cars, headed for Chicago. Walter White threw up the job in disgust and loaded his steam car on the train for Cleveland. Bemb, of Detroit, started for Minneapolis to compete in the two days' reliability run there, and Lorimer took the "Blue Bird" to Boston. The Stearns camp broke up and went home to Cleveland. The electric timing device went on the "pazzaz" the first time it was put into commission, causing a delay of 45 minutes. The breakdown occurred during the motorcycle events, but the defect finally was repaired.

Twelve machines started the field and they burned up Perry Hill in the standing start trials, rain interrupting the flying start trials on Phillips hill. J. S. Tormey gave his "boss," John T. Fisher, the old time professional bicycle rider, a close run in the Perry hill climb. Riding a twin Indian in class 3, for machines of 50.10 cubic inches piston displacement, Fisher—who under motorcycle rules is not qualified to compete with amateurs—went up the slope in 28 seconds. Tormey equalled the mark in the free-for-all, beating Fisher by two-fifths of a second. Although the Indians made the fastest time in both the events for machines of 30.50 and 50.10 cubic inches piston displacement honors fell to Howard Holck, on a Thor. Excepting in the free-for-all the winners were evolved by formula and Holck won easily. C. S. Hinckley, Thor, had a walkover in the class for machines of 20.10 cubic inches, climbing the hill in 40⅗ seconds.

Lowering skies cast a chill over the promoting club as the last of the motor bicycles skimmed over the hill and orders were issued to hurry the big machines along. The Bendix buggy started the ball rolling in the class for high-wheelers, taking the event in 46⅖. The record established by the Holsman in last year's climb was 1:05⅖.

The Class B cars for roadsters and tourabouts under 50 square inches fractured the old mark in easy fashion. The Moline car finished in 37⅖ as compared with the former figure of 56 seconds. This class was won, so far as the program went, by the Buick with a percentage of 4.24, the Maxwell being second with a percentage of 4.72.

Class C, for piston area over 50 square inches, was then put in motion, and Frank Nutt, who was the first to ascend, sent his Haynes car up the slope in 39⅗ seconds, beating the old mark of 43 seconds. Branstetter's Wayne climbed in 36⅘ seconds, and the Moline, facing a blinding rainstorm, fought to the summit in 32⅖. Nutt won by the formula. The rain put a stop to further operations.

Before it came, however, Sulzberger had been permitted to try in the amateur free-for-all in order that he might strip the car for another event. The packer-automobilist simply ate up the hill in the record time of 25⅖, breaking the mark made by Leland last year in the same kind of car. The summaries:

Motorcycles.

Machines of 20.10 cu. in. displacement:

Rider and Machine.	Time.	Pct.
C. S. Hinckley, Thor, first	0:42⅖	2.45

Machines of 30.50 cu. in. displacement:

Howard Holck, Thor	0:38	2:52
J. S. Tormey, Indian	0:36⅕	3:10
Wm. H. Vallais, Armac	0:37⅘	3:14
H. T. Adams, Excelsior	0:43⅕	3:56
J. A. Turner, Merkel	0:47	4:44

Machines of 50.10 cu. in. displacement:

Howard Holck, Thor	0:36	2:39
Wm. H. Vallais, Armac	0:36⅘	3:13
John T. Fisher, Indian	0:28	3:23
J. S. Tormey, Indian	0:28⅘	3:40

J. A. Turner, Merkel, disqualified for using special machine.

Free-for-all:

J. S. Tormey, Indian	0:28
John T. Fisher, Indian	0:28⅖
Harvey Bernard, Harley-Davidson	0:32
J. A. Turner, Merkel	0:34
Adeland Mercil, Armac	0:34⅕
Wm. H. Vallais, Armac	0:37

Automobiles.

Class A, for motor buggies:

Car.	Time.	Pct.
Bendix	0:46⅖	3.72
Holsman	0:56⅕	3.90
Kiblinger	1:05⅖	4.13
Black	1:31⅕	6.33
Kiblinger	1:01⅕	3.33
Holsman	1:39⅕	6.68

Class B, cars piston area under 50 sq. in.

Buick	0:52⅖	4.24
Maxwell	1:02⅖	4.72
Jackson	1:19⅘	5.85
Moline	0:37⅖	3.72
Overland	0:55⅘	4.50
Waltham-Orient	1:11⅖	3.44
Auburn	0:54⅕	4.61
Buick	1:18⅖	4.65
Jackson	0:43⅖	4.17
Brush	1:27⅘	2.96

Class C, cars piston area over 50 sq. in.

Haynes	0:39⅗	3.88
Wayne	0:36⅘	4.33
Moline	0:32⅖	3.86

Class K, amateur free-for-all.

Stearns "Six"	0:25⅖

Paterson Non-Stop Race was Easy.

"It was too easy!" That was the unanimous opinion of all who competed in the first 100 miles non-stop, sealed bonnet regularity run over 25 miles of New Jersey roads last Saturday, 16th inst. The event was conducted by the North Jersey Automobile Club of Paterson, and the cars were required to cover a 25 miles course four times, the minimum time for each lap of the course being 1 hour 15 minutes, and the maximum time limit 1 hour 30 minutes.

Only two cars fell by the wayside. These were the Conover, driven by R. W. Bates, and the Corbin of M. Meredith. The latter experienced a broken chain after completing the first lap and while making its way up the hill toward Pompton the second time. Bates's car ran into a series of punctures on the second round and lost nearly an hour and one half, but as allowance was made for tire trouble he will not be disqualified.

The start was made at 10 a. m., from the corner of Union and Hamburgh avenues, Paterson, the cars being dispatched at three minutes intervals. Twelve cars started. The route embraced the towns of Hakedon, Pompton, Mountain View, Singac and Little Falls, and some of the hills were more than bumps. The ten drivers who finished on time, and their cars, are:

R. J. Beattie, Buick; J. Garlic, Overland; H. B. Haines, Knox; J. Hangeveld, Buick; J. C. Gould, Stevens-Duryea; C. A. Post, Winton; J. Van Derlock, Ford; G. De Witt Brown, Maxwell; J. Schofield, Corbin, and Walter Hudson, Overland.

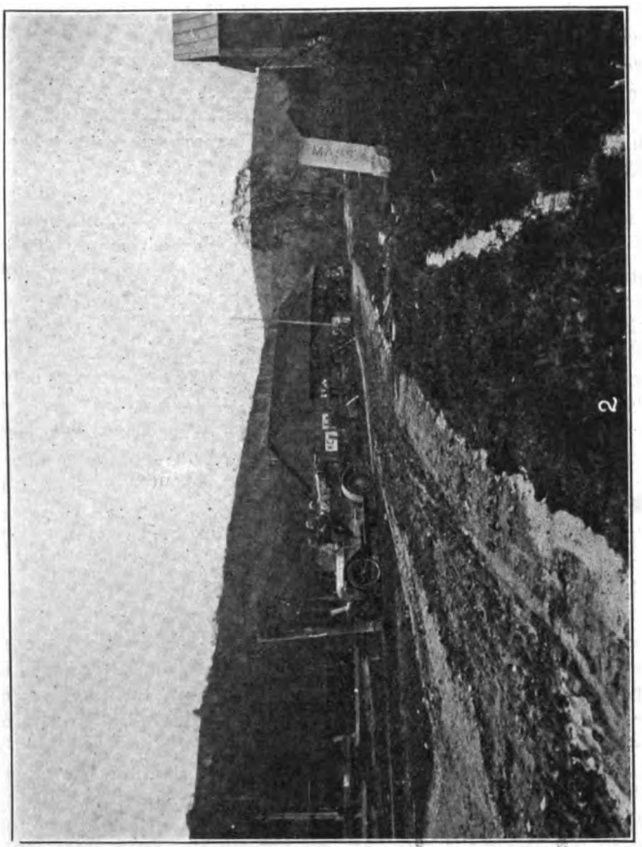
Because of so many finishers the club plans to hold another contest next month, with conditions much harder.

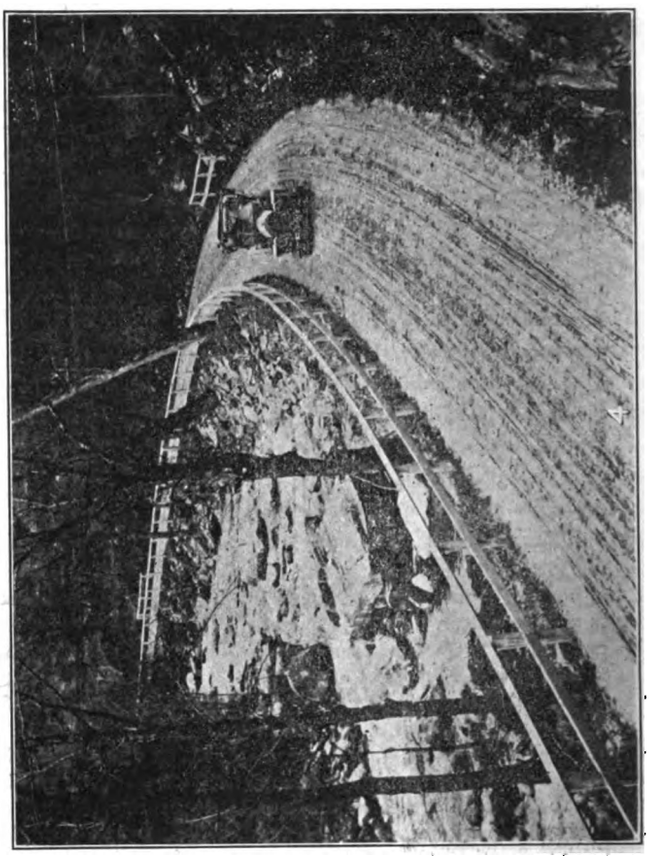
New Bedford to Hold a Climbfest.

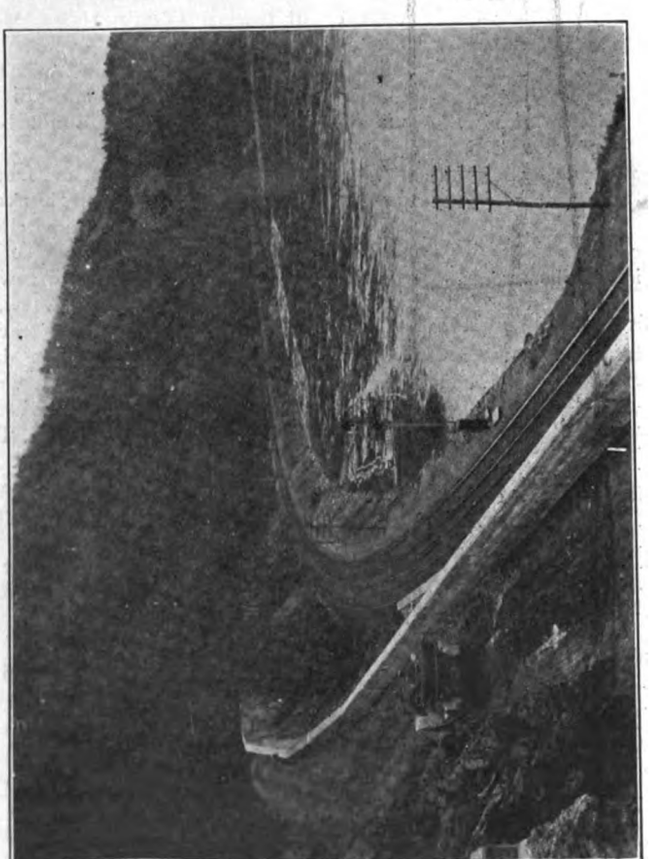
New Bedford, Mass., will have a hill climb on the morning of May 30th. The course will be that known as the Smith Mills hill and six events are programmed, as follows: Runabouts costing $1,000 or under; runabouts, $2,000 or under; runabouts, $3,000 or under; touring cars, $2,000 or under; touring cars $3,000 or under, and gasolene free-for-all.

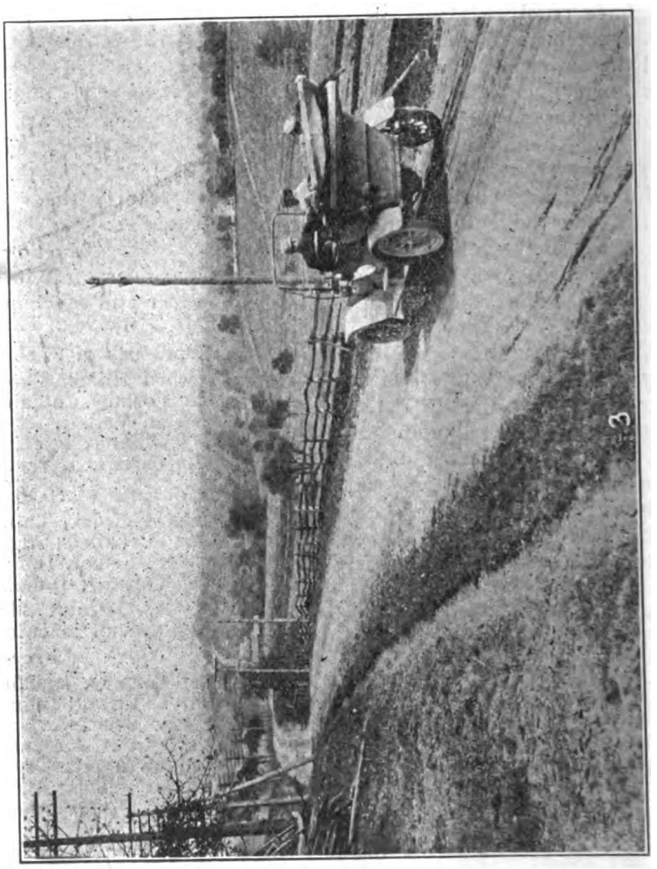
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ALONG THE ROUTE FOR THE GLIDDEN TOUR.









2. ON THE NEW YORK AND MASSACHUSETTS STATE LINE.
4. AN EASY CURVE NEAR CHESTER, PA.

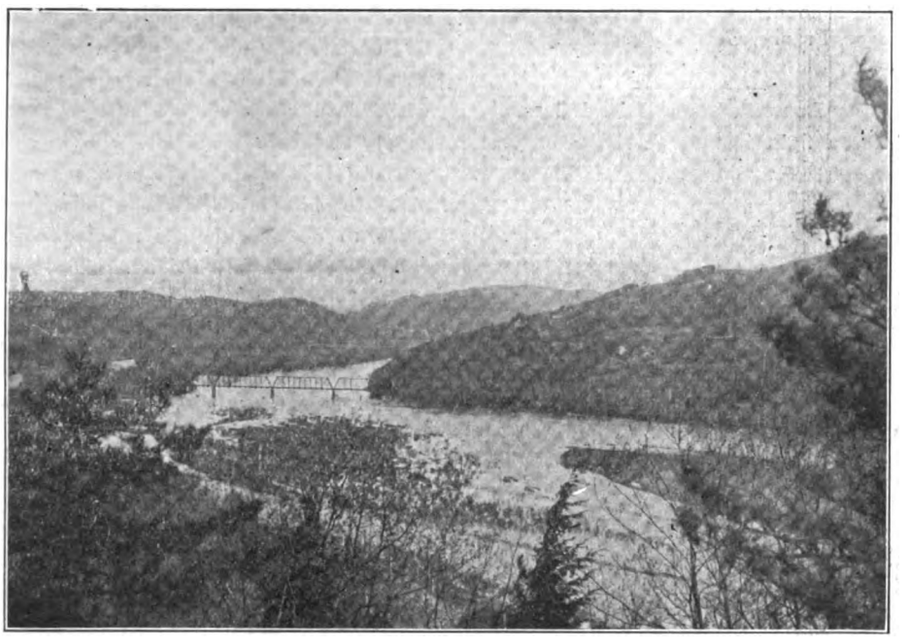
1. VIEW AT DELAWARE WATER GAP.
3. JUST OUT FROM READING, PA.

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GLIDDEN ITINERARY COMPLETE

Route Reveals the Picturesqueness of American Landscape — Nature's Beauty Spots Chosen for Resting Places.

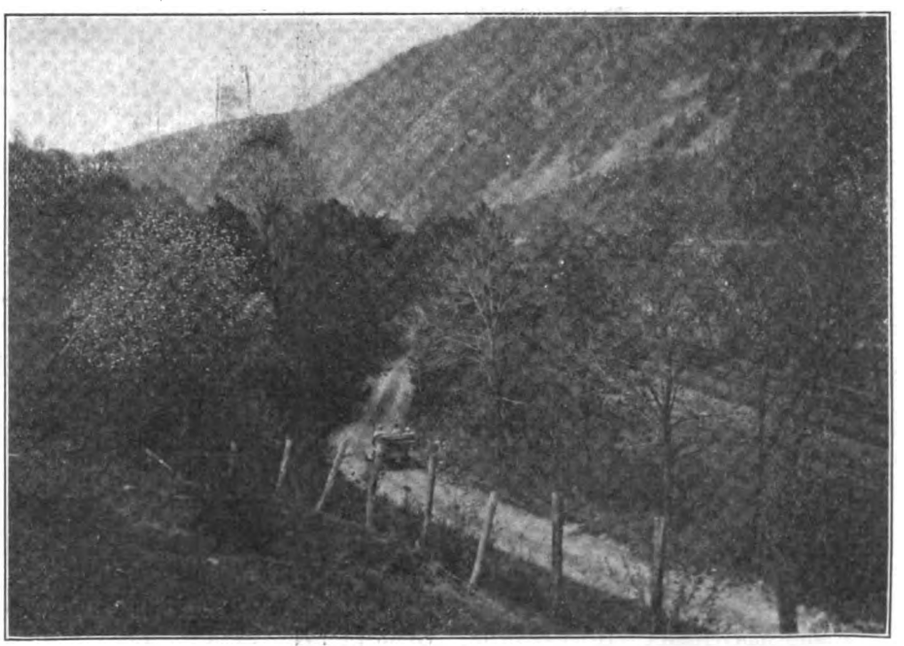
The preliminary survey of the route for the A. A. A. touring contest for the Glidden trophy has been completed by Secretary Dai Lewis and his six-cylinder Premier pathfinder. The itinerary discloses a midsummer trip rich in picturesque scenery and variety of roads. The tour will be between 1,600 and 1,700 miles in length; it will occupy 14 days, of which two will be Sundays, when no traveling will be done.



VIEW ON THE DELAWARE RIVER

The schedule day by day, with the overnight stopping places is as follows: July 9, Buffalo, N. Y., to Cambridge Springs, Pa., 117.4 miles; July 10, Cambridge Springs to Pittsburg, Pa., 110.2 miles; July 11, Pittsburg to Bedford Springs, 106.4 miles; July 12 (Sunday), at Bedford Springs; July 13, Bedford Springs to Harisburg, 107.3 miles; July 14, Harrisburg to Philadelphia, 133.5 miles; July 15, Philadelphia to Milford, 132 miles; July 16, Milford to Albany, 158.5 miles; July 17, Albany to Boston, 194.2 miles; July 18, Boston to Poland Springs, Me., 154 miles; July 19 (Sunday), at Poland Springs; July 20, Poland Springs to Rangeley Lake, Me., 176 miles; July 21, Rangeley Lake to Bethlehem, N. H., 131 miles; July 22, Bethlehem, N. H. to Saratoga Springs, N. Y.

The recurrence of springs as stopping places is suggestive of how the competitive character of this year's event is to be offset by stops at points of beauty and restfulness. After leaving Philadelphia, and excepting only Albany and Boston, the stops will be at mountain resorts famed for their beauty. First of these is Milford, in Pike county, Pa., which is reached after a run through the Delaware Water Gap and up past Buskill and Dingman's Ferry. The trip from Milford up the west shore of the Hudson will lead through the glorious scenery of Port Jervis, Middletown, Newburgh, Kingston, etc., and from Albany to Boston the route leads through Nature's splendors all the way, including passage through the Berkshires and over Jacob's Ladder. From Boston the run leads over historic as well as beauteous territory, by way of Lynn, Salem, Newburyport, Mass., Portsmouth, N. H., and Biddeford and Portland, to Poland Springs, Me., where Sunday will be spent. From Poland Springs the contestants will drive through the Maine forest to Rangeley Lake, which will rejoice those who participated in the 1906 tour and remember the delightful time they had at that resort. After Rangeley Lake comes a night in the White Mountains, not far from Mt. Washington, at Bethlehem, and then there is a drive across New Hampshire and Vermont to Saratoga Springs.



GOING INTO THE DELAWARE WATER GAP

Since leaving Pennsylvania, the pathfinders have had mostly pleasant weather and have enjoyed their work. Besides the floods in the Keystone State they had the toll gates to add to their annoyance, for it is exacting work to get these all properly recorded. Often the signs indicating these places are so inconspicuous that they are apt to be missed, unless the route book is closely followed, and this will cause more trouble than stopping and paying, for it means arrest at the next town.

Signals of Distress for the Desert.

Like the Indians and plainsmen of earlier days, the drivers of automobiles on the western deserts have devised smoke signals and fire codes that serve them in great stead at times. The large use of motor cars to and from the gold camps has made such systems almost necessary. Quite recently a car driven by Charles F. Kapp went bad in the desert outside of Goldfield, Nev., and after many vain efforts to get it started again, Knapp lighted a sagebrush fire, the smoke of which served as a distress signal. A driver on a distant path recognized the signal and came to the rescue, saving the stranded party from an arduous and painful journey afoot to civilization, the seriousness of which is increased by the thirst provoking character of the desert and the absence of water.

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VANDERBILT RULES PROTESTED

France Suddenly Renews Its Interest and Objects to Weight Limit—Objections are Respectfully Filed.

Although it was mailed from France on April 18th, Chairman Jefferson De Mont Thompson, of the racing board of the American Automobile Association, has just received a belated protest from the Automobile Club of France against the new rules for the Vanderbilt cup race, adopted more than six weeks ago. The letter was sent to the Automobile Club of America, which is the "foreign correspondent" of the French club. The unusual part of the procedure is that Robert Lee Morrell, chairman of the Automobile Club of America's contest committee, gave the news of the protest to the newspapers before the proper officers of the American Automobile Association, which is the governing body in this country, heard anything about it.

Despite the fact that the Automobile Club of America is not the governing body in America, the Automobile Club of France considers its "foreign correspondent" as such and to its president addressed the letter of protest. In short, it was to the effect that the new Vanderbilt cup rules are not in accord with the regulations adopted by the "International Association of Recognized Automobile Clubs" at its meeting at Ostend, held on July 14, 1907. The letter from the French club requests that the rules be changed to conform to the European ideas, and states that if it is not done the foreign manufacturers will not be able to enter the race.

If appears that until this week the American Automobile Association having received no word from the Automobile Club of America about the foreign rules, delegated A. L. Riker to ascertain if the Automobile Club of America's foreign delegate had any report to make concerning the conference and the adoption of new rules. Riker, however, was unable to obtain any information.

Just where the Automobile Club of France "gets off at," to employ a slang expression, to make a protest, is a matter for interesting conjecture. The club has had no official connection with the Vanderbilt cup race for two years and the last time it was held refused to name an official team for the race, the time before that refusing custody of the cup. The entries for the last Vanderbilt race were made independently by manufacturers. It is difficult, therefore, to clearly understand the suddenly revived interest of the Automobile Club of France in the matter in question; there are those who are mean enough to believe that it was inspired in America for ulterior purposes.

At any rate, Chairman Thompson, who is a member of the A. C. A., is not worrying over the tardy protest, made through the "foreign correspondent" of the French club. He states that the rules are fixed and will remain unchanged, and that the letters will be referred to the racing board merely as a matter of courtesy. He also states that the possibility of foreign entries not being made in view of the changes was discussed at the time they were made and that any fear that they will be withheld on this account is ill-founded. He has been assured that five countries will be represented in the race, France, Germany and Italy among them.

City Loses in Staten Island Case.

After a fight lasting nearly eight years, Justice Lesler W. Clark and a jury in the Richmond county Supreme Court last Saturday, 16th inst., gave a verdict for $10,000 in favor of the relatives of Andrew Featherstone of New Brighton, who had sued the City of New York for $50.000 damages as the result of the ill-fated speed trials on the South Shore boulevard, Staten Island, May 30, 1900. Featherstone was killed along with two others when the freak Baker electric racer left the boulevard and ran into the crowd lining the course, permission for the use of which had been granted the Automobile Club of America for the races. The relatives of the dead man brought suit against the city, claiming that it had no right to give over the public roads for a dangerous race of the sort, and the case has been fought for nearly eight years. The sum asked was $50,000; the verdict was for $10,000.

Orphans' Parade Fixed for June 9th.

New York's fourth annual parade of unfortunates, called the Orphans' Parade, will take place on Tuesday, June 9th. The date was settled at a meeting of the Orphans' Day automobile committee of New York, held this week, at which permanent organization was effected with W. J. Morgan general manager; A. F. Comancho, assistant general manager, and Alex Schwalbach, secretary. The following committee chairmen were appointed: George W. Bennett, executive; Colonel K. C. Pardee, reception, and R. G. Howell, entertainment. The orphans will be given a day's outing at Luna Park.

Fast Average in Targo Florio.

Trucco, driving a 40 horsepower Isotta-Fraschini car, won the Targo Florio race over the Sicily circuit on Monday, 18th inst., according to cable dispatches from Milan. Lancia, well known in this country as a competitor in Vanderbilt cup races, was second in a Fiat, but 13 minutes behind Trucco. The winner drove the same car in which he scored a victory in the stock car race over the Padova Bolanenta circuit a month ago. Trucco's average speed in the Targo Florio was 75 miles an hour, but the total time and distance is not given.

ST. CHAFFRAY CORNERS THE FUEL

Why the New York-Paris "Racers" Were Delayed at Vladivostok—Only Two Now in the Contest.

The American Thomas and the German Protos cars did not leave Vladivostok yesterday (Wednesday) on the last stage of the New York-Paris trip, as was expected. According to the tale of the correspondent who is accompanying the American crew, G. Bourcier St. Chaffray, who was in charge of the French De Dion car before it was withdrawn, cornered the entire gasolene supply at the Siberian port, and would not sell any of it unless the Americans made a place for him in their car. This they refused to do and the start across Siberia will be delayed until Friday. Of the seven original starters there are now only two left, the American and German entries, the Italian Zust having been withdrawn. The German Protos is the car that was shipped by rail from Pocatello, Idaho, to Seattle, Wash., in order to enable it to take the steamer for Valdivostok. According to a decision of the French promoters the Thomas car is supposed to have a lead of 30 days on the Protos, but it is expected that both of these cars will leave Vladivostok together.

Solid Gold Cup Offered as Prize.

A solid gold cup is the unusually attractive prize offered to the winner in the free-for-all class in the road speed tests to be held at Mount Pocomo, Pa., in connection with the automobile carnival being promoted by the Monroe County Automobile Association, the dates for which have been set for June 24, 25, 26 and 27. Entry blanks were issued this week and show that the carnival is one of the most ambitious ever projected. As has been stated in the Motor World the carnival will begin with a reliability run to Stroudsburg, Pa., starting simultaneously from New York City and from Philadelphia. In addition to the straightaway trials there will be two hill climbs—one up Delaware Water Gap hill, for nine classes, and the other on Canendenis hill, with the same number of events for amateur drivers. Six events will comprise the gymkana meet. Entry blanks are to be had of A. F. Everitt, secretary, Stroudsburg, Pa.

May Organize to Insure Automobiles.

Governor Hughes, of New York, has signed the bill introduced by Assemblyman Weinert authorizing the incorporation of companies to insure automobiles. Under the provisions of the act the companies organized for such purposes will be authorized to insure automobiles, the insurance covering them whether they are on the road or housed.

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ODD SPILL AT SAN DIEGO MEET

Mishap Mars a Fine Event—Five Vain Attacks on a Record—Big Crowd Sees Good Sport.

Although no world's records went by the boards the race meet held by the Automobile Dealers' Association of San Diego, at the Lakeside (Cal.) track on Saturday, 9th inst., was one of the most successful ever held in Southern California. Perhaps the greatest interest of the day was centered in the efforts of R. L. Hanshue to reduce the record for the track established last year by Barney Oldfield at 51⅗ seconds for the mile. The best that Hanshue could do, although he made five attempts, was 53⅗ seconds. Fifty-four seconds was his slowest time, so that it can be seen that he made practically the same time in all the trials. The attendance numbered several thousand.

The only occurrence to mar the day's sport was an accident in the second event for runabouts listed at $1,500 and under, which brought four starters to the tape. Up to the first and last lap the race had every evidence of being the star event of the day. A Mitchell with F. S. Cavin driving, had nosed out a lead when the judge's hand was passed on the bell lap, with Fred Roberts, Buick, overlapping. For some reason Ed Gardner, mechanic on the Mitchell, climbed out on the hood. Cavin did not seem to know what was going on and swerved to one side. The car turned in the air twice, but landed upright. Cavin was not hurt, but Gardner fell in such a way as to be caught by one of the rear wheels, fracturing his leg in two places. He was immediately taken care of by surgeons at the track and later conveyed to San Diego by train.

Aside from this spill the day was free from anything like an accident. Two events that aroused considerable interest were the double meetings at six miles each between John Finletter, in his Thomas, and John Schripps, Packard. The morning went to Finletter in 7:31⅗, and in the afternoon Schripps turned the balance. Another interesting event was the challenge match between Harry Crane, Rambler, and Morrison, Earl runabout, for $100 a side. There was nothing to it but the Rambler and it rambled the two miles in 4:34⅗. The Earl was lost in the dust. The summaries:

Ten miles for runabouts listed at $1,500 or less—Won by F. B. Naylor, Buick, the only car to finish after the accident. Time, 13:09.

Six miles, match between Finletter, Thomas and John Schripps, Packard. Won by Finletter. Time, 7:31⅗.

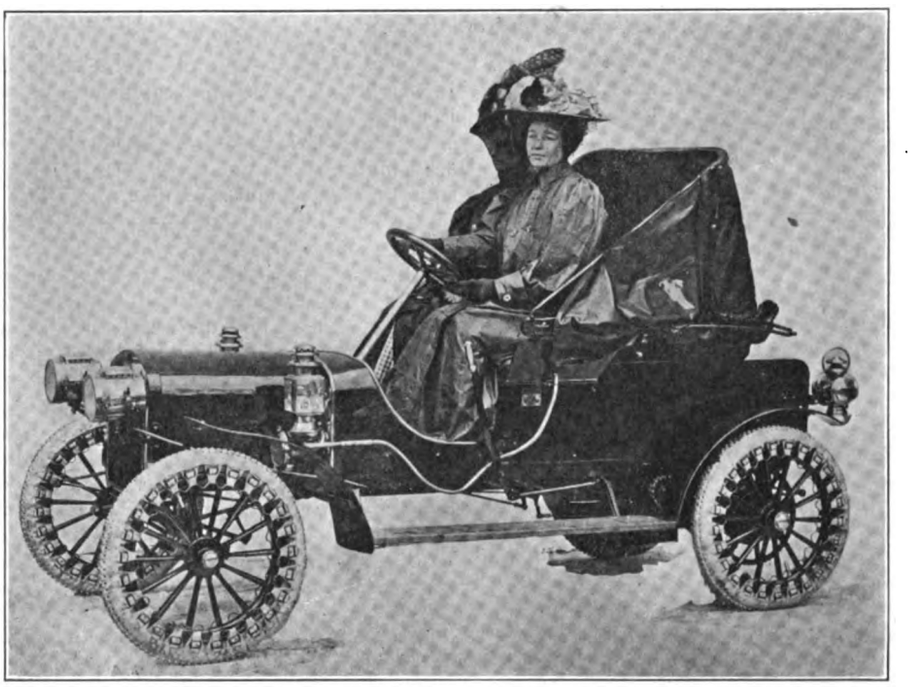
Ten miles for touring cars listed at $1,600 and under—Walkover for C. L. Kistler, Maxwell. Time, 17:02⅗.

Four miles for road motorcycles, single cylinder—Won by A. Waite, Indian; second, Thorndyke, Indian; third, Urquhart, Indian. Time, 6:16⅘.

Four miles for two cylinder motorcycles—Won by C. A. Shepard, Indian; second, Gordon, Custiss. Time, 4:01⅗.

Ten miles open for runabouts—Won by John Schripps, Packard; second, Charles Seacrist, Buick; third, F. E. Seftons, Pope-Toledo. Time, 13:26⅗.

Ten miles for runabouts listed at $1,000 and under—Won by L. C. Kessler, Maxwell; second, H. D. Field, Maxwell; third, G. V. Cochran, Ford. Time, 18:55.



WOMEN WHO ASPIRE TO TRANSCONTINENTAL HONORS.

Ten miles for touring cars listed at $2,000 or under—Won by R. M. Bouser, Tourist; second, H. Turner, Maxwell; third, J. Hunt, Franklin. Time, 13:26⅗.

Six miles match between John Finletter and John Schripps—Won by Schripps. Time, 7:26⅘.

One mile record trial—By. R. L. Hanshue, Reo. Time, 0:53⅗.

One mile record trials—By John Finletter, Thomas. Time, 1:06⅗, 1:02, 1:06.

Fined for Race with the Stork.

Taking his cue from a humorous picture that has had wide circulation, Dr. C. L. Mix, of Chicago, gave as his excuse for overspeeding his automobile that he was "racing with the stork, and didn't want to come in second."

"I am sorry the officers didn't take the stork, too," replied the Windy City magistrate, "for I would have given him a fine as well. The law allows us to make no discrimination in the case of physicians, but I will let you go with a minimum fine this time. Ten dollars!" and the physician departed poorer but wiser.

FROM PORTLAND TO PORTLAND

Two Women on Leisurely Jaunt from Maine City to Namesake in Oregon—Their Probable Route.

The two women who, unaided by men, are first to essay the feat—Mrs. E. E. Teape and her daughter, Mrs. Vera McKelvie, of Sands Point, Idaho—left Portland, Me., on Thursday last, 14th inst., for their leisurely jaunt across the continent. They expect to journey to Portland, Ore., the route being via Boston, Springfield, Albany, Syracuse, Buffalo, Cleveland, Chicago, Des Moines, Cheyenne, Salt Lake City, Boise City and Baker City. They are driving a two cylinder runabout.

New York State Ahead of France.

While it generally is thought that France contains an enormous number of automobiles, the most recent statistics published show that the number of cars used in that country is about 10,000 less than are registered in New York State alone. In Paris and the Seine department there are 7,670 cars, in the rest of France the number in use is 27,180, making a total of 34,850, exclusive of about 4,000 kept for hire.

March of Progress Reached Humboldt.

"The first home-owned automobile appeared on the streets yesterday and created quite a good deal of attention, especially among the horses and mules which it happened to meet. The machine is owned by T. C. Ferrell, a prominent undertaker."—Humboldt correspondence Memphis (Tenn.) Scimitar.

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FARMERS URGED THE "RACERS" ON

Kansas City Endurance Run Marked by Killings—Snakes Among the Victims and no Human Lives Lost.

Seventeen perfect scores and three killings, one of which was a double death, were the net results of the annual 145 miles endurance run conducted by the Automobile Club of Kansas City on Saturday last, 16th inst. Fortunately the killings did not bring any human beings to an untimely end, the victims being species of lower development. Heine Holtzhauer ran over a dog in the main street at Lawrence, and the Royal Tourist driven by M. C. Albertson ran over two snakes at once that were sunning themselves in a road. The other casualty was the killing of a rabbit whose curiosity was greater than its caution, W. G. Whitcomb's pilot car being the scorer.

With the exception of this depletion of the animal ranks the annual endurance run of the Kansas City motorists was a success. There were 28 starters, and 17 cars covered the 145 miles on an 18 miles an hour schedule without losing a point, while five of those who lost points averaged better than ninety. Twenty-two cars finished on schedule time, only five of the original number of starters failing to reach the finish before 6 o'clock.

The day was ideal, the roads uniformly good, plenty of cars were entered and the interest was intense. To add to the enjoyment and amusement of the contestants the farmers along the line appeared to be greatly interested. They thought the run was a free-for-all race and many stopped their ploughing to wave a hand and shout, encouragingly:

"Go on; you're only a little way behind!"

Many farm houses along the route were decorated with flags and bunting and at Wellsville the street was overhung with this kind of decoration while there was scarcely a business house that did not dis- y some sort of recognition. The route through Z rah, De Soto, Lawrence, Ottawa, and Edgerton, checking ng located at these places. El- s, Maxwell, could have put in hard luck prize had there been misfortune. Four times the nt down and just about the gratulated himself that his er, the tire went flat for e was three hours late into lowing is the official sum- erfect score:

White	100
Maxwell	100
omas	100
yal Tourist	100
s-Duryea	100
mobile	100
ard	100
Hartford	100
t Arrow	100
W. M. Goodrich, Studebaker	100
Fletcher Cowherd, Corbin	100
Edson S. Cowen, Premier	100
Roy Sanborn, Stanley	100
D. B. Munger, Peerless	100
J. F. Moriarty, Stevens-Duryea	100
H. E. Rooklidge, 2d, White	100
S. R. Bell, Jr., Franklin	100
G. T. Beaham, Pennsylvania	99
Nelson Haynes, Mitchell	97
Herman Peltzer, Corbin	95
G. W. Bonney, Knox	94
F. E. Foulke, Pennsylvania	91

Of the other contestants, Edmond Follonsbee returned by mistake from Lawrence; C. F. Mensig, Stoddard-Dayton, did not finish until after 7 o'clock because of tire blow-outs; Wilkins Taylor, Reo, reached Kansas City at midnight; Elliott H. Jones, Maxwell, was three hours late at the finish; C. D. Mayhugh, Reo, did not return to the judges' stand, and the judges did not clearly understand the observers' report on W. L. Walls, Studebaker, but the score was not perfect.

Fatal Result of a Sudden Stop.

An unusual accident, which is extremely possible to other children at any time under similar circumstances, resulted in the death of a 12-year-old girl, was caused by the sudden stopping of the automobile in which she was riding in Stamford, Conn., on Monday, the 18th inst. She was sitting in the rear seat and the sudden application of the brakes to avoid collision with another vehicle, caused her to be thrown forward so that her head hit the seat in front. At the time of the accident no serious results were observed, but a few hours later she suffered a severe hemorrhage and physicians decided that a clot of blood had formed on her brain. The child died on the following day from the effects of the injury.

To Make an "Economy Tour" Abroad.

Believing it possible to take a comfortable motor tour of Europe at a cost not to exceed $4.68 per day, Dr. A. H. Beaton, president of the Sedalia, Mo., Automobile Club, is starting from Paris to prove it. He plans to make about a hundred miles a day, and will keep track of all expenses. He is using a small runabout. Just why he should have selected such a bargain counter figure as an expense estimate for each day is not disclosed, but if he is successful it will do much to rob European motor touring of its popularity with those whose pleasures are seemingly proportionate only to the expense involved.

Big Entry List for German Contest.

The entry list for the Prince Henry Reliability Tour has been closed with 145 cars. In this tour, which will be held in Germany during June, there are 107 German cars, entered by 24 makers; 7 French manufacturers enter 9 cars; 4 Belgian makers enter 11 cars; 2 Austrians enter 5 cars; Switzerland will be represented by 2 makers and 3 cars; 3 Italian manufacturers with 5 cars, while England sent but one. America is not represented.

CONABLE HIT THE EXACT TIME

Winning Driver in Wilmington's "Guessability" Contest an Intuitive Clock—Other Contendants Guessed Well.

Wilmington automobilists held their first road contest on Saturday last, 16th inst., it taking the form of a 44.8 miles "guessability" contest from Wilmington, Del., to West Chester, Pa., and return by way of Kennet Square. The Delaware Automobile Association was the promoter. The only prize offered, a silver loving cup, was won by Frank L. Conable, who drove a Franklin touring car. Conable covered the distance in 3 hours 29 minutes, the exact time fixed by the committee.

H. S. Lane, of Philadelphia, driving a Thomas runabout, was second in 3:29:00, and Robert S. Glover, Wilmington, in a Maxwell touring car, was third in 3:34:00. Of the 32 starters three dropped, the names of two of whom the committee would not divulge.

The committee kept the time a secret the conditions being that the car which should finish nearest the predetermined time should be declared the winner.

Thirty-two cars left the starting point at Tenth and King streets at noon in the following order, at one minute intervals: J. J. Satterthwaite, Marmon; John B. Bird, Franklin; William Stainiar, Franklin; A. B. Hazzard, Maxwell; Robert S. Glover, Maxwell; William H. Jones, Rambler; William L. Hammond, Mitchell; J. R. Richardson, Mitchell; Dr. J. C. Fahey, Maxwell; Robert Rothschild, Ranier; Charles C. Kurtz, Franklin; Ernest duPont, Buick; W. W. Ramsdell, Stoddard-Dayton; A. Bryson, Taylor, Mitchell; Robert S. Baird, Maxwell; Frank L. Cannable, Franklin; H. M. Taylor, Maxwell; John T. Thompson, Buick; George A. Elliott, Pierce Arrow; John B. Martin, Franklin; J. D. Bush, Franklin; S. H. Dillon, Jackson; Lammot duPont, Orient; W. E. Holland, Ford; Mrs. Eugene du Pont, Franklin; H. S. Lane, Thomas; E. Paul du Pont, Pope-Hartford; T. C. Bradford, Reo; and John Bancroft, Apperson.

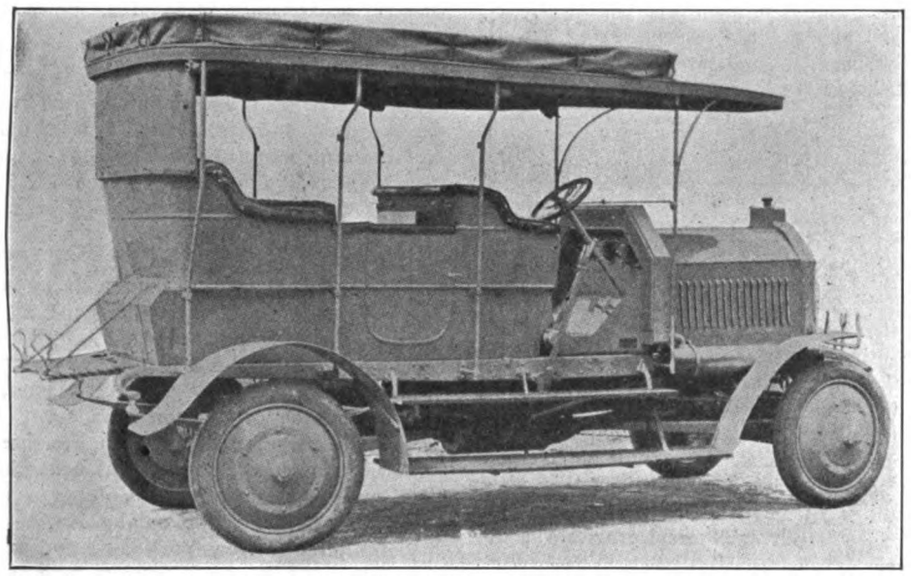
Mrs. Eugene E. du Pont, the only woman contestant, dropped out soon after the start, with a broken chain, but accompanied her husband over the remainder of the journey. E. Paul du Pont lost some minutes by running over the grass plot of the Garfield monument and J. R. Richardson was held up some time when he ran into a negro boy who had jumped from the step of an ice wagon directly in front of the automobile. The boy was only slightly bruised. The only other "casualty" reported was by William H. Jones, who ran into a ditch. He got out and finished the run, however. The fastest time made was by Richardson's Mitchell, which covered the 44.8 miles in 2 hours 27 minutes.

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ADAPTED TO SERVICE IN AFRICA

Unusual Details in Newly Designed Foreign Car—Rapid and Ready Control a Leading Feature.

Motor vehicles for use in outlandish parts connot, as a rule, be constructed on the same lines as those which are designed for use on ordinary roads close to the limits of civilization, if not absolutely within them. Lack of appreciation of this fact has caused the downfall of more than one grand scheme for commercializing the automobile. Within a year or two, however, manufacturers have come to realize the need of special equipments for special uses, and the resulting constructions have been as interesting as they have been varied. A novel example of the sort, is depicted in the accompanying illustration, which shows a car which has recently been built by the German-Daimler Co., in its shops at Marienfelde, for use by the German Colonial Office in German Southwest Africa. It is designed to carry six passengers and is constructed with especial regard to the requirements of unusually arduous service.



DAIMLER CAR FOR SOUTHWESTERN AFRICA

The power plant consists of a four-cylinder, 45 horsepower motor, mounted in front in the usual way and driving through a special form of gear reduction to all four wheels. In addition to the use of four-wheel drive, four-wheel steering is resorted to, the result being an unusually quick-working and readily handled vehicle. In order to facilitate cooling when running for long stretches at slow speeds and on low gear, an unusual amount of radiator and tank capacity has been provided. In addition to the regular radiator, mounted in front and made of more than normal thickness, a second is carried on the dash board, formed, as in the Renault system around the outside of the hood. These are further supplemented by two cylindrical tanks placed on either side of the frame at the base of the hood. Special attention has been paid to rendering the mechanism dust and sand proof, in which connection the use of metallic, disc wheels will be observed. The necessity of high road clearance and solid construction throughout has served to render the vehicle far more serviceable than beautiful. But as it is intended to serve in a country where "lines" are subordinated to results, this feature probably will not be counted against it.

To Test Commercial Vehicles in Russia.

In common with the development of the automobile movement in other respects, Russia is experiencing an awakening to the possibilities of the commercial vehicle. Significant of this is the competition which is scheduled to occur an May 24, under the auspices of the Moscow branch of the Russian Motor Club over the Moscow-St. Petersburg road. Vehicles will be arranged in three classes: Those in Class 1, carrying a load of over 2½ tons; Class 2, being for cars carrying a load of between 1½ and 2½ tons, and Class 3, for cars carrying loads under 1½ tons. From the maximum useful loads set forth in the maker's catalogue a deduction of 6½ cwts, will be made for body work. There is no speed limit for the third class, but the maximum speed for the first two classes is 10 miles per hour. None of the vehicles in either class may be shod with pneumatic or iron tires.

Locomotives have been supplanted on the Rahway Valley Railway by gasolene driven "automobile" coaches, on that part of the Jersey road between Summit and Aldene. Over a thousand of the company's commuters were recently given a demonstration ride in one of the new cars, not however, on the one trip.

ENGLAND'S FIRST DYNAMOMETER

Enterprising Scheme for Checking Results of Repairs—Exaggerated Ratings as Shown by Early Tests.

England's first car dynamometer designed and used exclusively for automobile testing purposes, has just been put into service by an enterprising firm of garagemen in Norwich. Despite the considerable amount of experimental work which has been performed upon the motor car in Great Britain, in which the technical committee of the Royal Automobile Club has had a leading hand, it remained for trade interests to appreciate the importance of learning the exact relationship between the brake horsepower of the motor and the net power available for purposes of propulsion at the driving wheels. The credit in this respect belongs to the management of the Victoria Garage, in which the complete dynamometer has been installed.

Several original features are observable in the construction of this device. For instance, instead of being placed directly upon the single roller to which the dynamometer is attached, as is done in the machine employed by the Automobile Club of America, the driving wheels of the car under test rest simultaneously upon two adjacent rollers. The position of the vehicle is thus readily fixed and there is no danger of error through failure to place the vehicle in just the proper position with relation to the rollers. The driving torque is transmitted through one of the roller shafts, the other being merely an idler serving to support the wheels in position. As in the A. C. A. dynamometer mentioned, the car is anchored in position and the drawbar pull or tractive effort is not considered as a separate quantity, but is taken into account indirectly in the power calculations performed from the brake readings.

A tachometer permanently attached to the mechanism, records the speed of the working rollers, both in revolutions per minute and in miles per hour. The power developed is absorbed by a magnetic brake, in which the braking energy is secured from external sources and is consequently subject to delicate regulation, while the torque is weighed by balancing the brake arm, as in the ordinary type of brake. Corrections are necessary to account for power absorbed by the brake mechanism itself, but owing to the use of two sets of rollers, ensuring parallelism between the rear axle of the car and the braking roller, there is practically no slip between the wheels and the brake, it is said. The traction surface of the brake rollers is a form of rubber cloth

Reports of various initial tests made up on private cars reveal the to-be-expected discrepancy between rated and developed powers, and have created a small sized

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flurry of interest in the device and its indications, which promises to extend rapidly as the use of the machine becomes more general. Incidentally the results of some of these tests throw some light on the methods of rating in England, and are therefore of no little interest. Some of the observations are given in the following table:

Type.	Nominal H.P.	H.P.	Miles per hour.
Brougham	14	7.24	28.5
Chassis	18	*17.58	33
Landaulet	20	11	34
Runabout (6-cylinder)	20	13.05	39
Touring	18	*12	38
Touring	20	10	34
Touring (6-cylinder).	20	*16	38

* Sustained only for a short time.

Despite its great utility as a means of checking the makers' ratings, and in research work, it is worthy of note that these are not the sole uses for which the machine was primarily designed, although it was hoped it would be patronized for such purposes. It was the intent of the designers to so construct and place the machine in the garage that it might be utilized for testing out machines upon which repairs were being made, checking up valve and ignition settings, investigating the losses in transmissions, and the effects of adjustments, refittings, and alterations in structure. With this in view, the machine has been so placed that a car may be readily run upon it from the repair shop or garage, adjusted in a minimum of time, and the tests run off without delay of any sort.

"Tinkeritis" that may Prove Expensive.

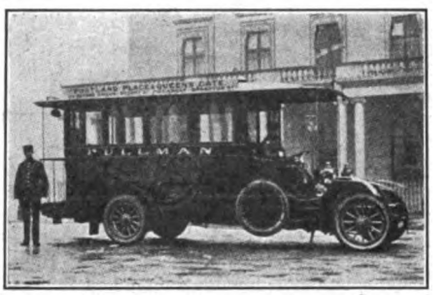
When a comparatively new motorist has had "just about so much" experience, he reaches a point where his wisdom is sufficient according to his own estimation, to enable him to tackle almost any problem which may come up. So long as only modifications of adjustment are attempted, this mood is not apt to lead to any great harm. But once modifications of a permanent nature are undertaken there is danger of making expensive mistakes. One particularly inviting point of attack which may be mentioned in this connection is the fuel jet of the carburetter.

When the owner has become convinced that the size of the jet is either too great or too small for most successful performance, and undertakes to alter the size of the opening, he is practically certain to come to grief. Because of the difficulty of performing the work he must be a courageous man indeed who will attempt to alter the design of the machine in other than minor respects. But the temptation to tinker with the carburetter and particularly with the jet is so great that the owner who passes his novitiate without having to buy one or two new jets to compensate for his mistakes, may count himself as among the lucky ones, although the incurring of this needless expense might be a salutary lesson.

PULLMAN'S FOR THE PROUD POOR

Luxurious Omnibus Service for Londoners —Much Finer than the Penny 'Bus and Cheaper that the Taxicab.

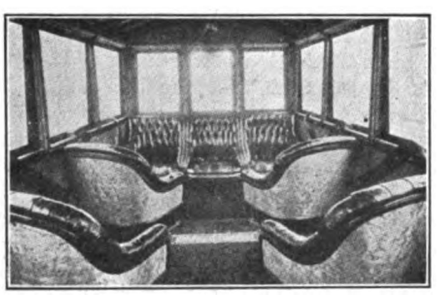
During the last two or three years London has become thoroughly assimilated to the motor vehicle as devoted to the uses of public transportation. Despite the tremendous popularity of the motor bus and the taxicab, however, one enterprising traffic



THE PULLMAN OMNIBUS

manager has discerned, or at least has thought he discerned, an opening for yet another type of vehicle, neither the one nor the other, but an intermediate type, suited to the patronage of those who, according to the fine class distinctions of England's proud metropolis are too good to ride in ordinary 'buses, and too poor to patronize the taxicab. The outcome of this vision is a line of "Pullman" omnibuses, which have been put into service within a few days.

The vehicles which constitute the equipment of this unique line are single deck, rear entrance omnibuses, fitted in de luxe style throughout, and mounted on chassis



INTERIOR OF THE PULLMAN

which are capable of outstripping the ordinary penny 'buses under all circumstances. They accord seating capacity for only nine passengers. As shown in one of the accompanying pictures, several large, swivel arm chairs and a divan, form the seating accommodation. The trimmings are on a sumptuous scale, and compare favorably with those of the average private limousine. Ten electric lights sunk into the roof, furnish the necessary illumination at night, and are supplied with current from storage batteries. During cold weather, the interior is heated by radiators through which the motor exhaust is circulated.

The chassis employed are the 20-30 horsepower Charron, propelled by 4-cylinder motors, which drive through a 4-speed gearset and side chains. The maximum geared speed is 25 miles an hour. Another unusual feature in machines of this class is that the wheels are equipped with pneumatic tires.

The service has been inaugurated by the Pullman Co., which was prominent in connection with the introduction of the present taxicab service. The initial consignment of machines, three in number, is already on the road, running from Queen's Gate to Portland Place and return, by way of Cromwell Road, Brompton Road, Knightsbridge, Piccadilly and Regent street. The fare is "sixpence all the way," and the present schedule is daily except Sunday. The vehicles also are available for private service at $50 per day. They are finished externally in maroon, and are manned by liveried drivers and conductors. The scheme calls for the installation of 50 such vehicles to be put in service before midsummer.

Witherbee Produces a New Magneto.

Like the early touring cars, a great many of the earlier magnetos to be used in this country came from abroad. With the full establishment of the demand, however, development of the home product is apparent in this branch of ignition auxiliaries, similar to that whch took place in the case of American made cars. A recent example of this is found in the new Volta magneto, which has been brought out by the Witherbee Igniter Co., New York City, and which is of the popular high tension type. The armature, which is wound to furnish the high tension current directly without transformation, is mounted on ball bearings, and is of approved and compact construction. The distributor, geared to the armature, is provided with the usual advance mechanism. The instruments are made for installation upon motors of from one to six cylinders.

Marking Parts When Dismantling.

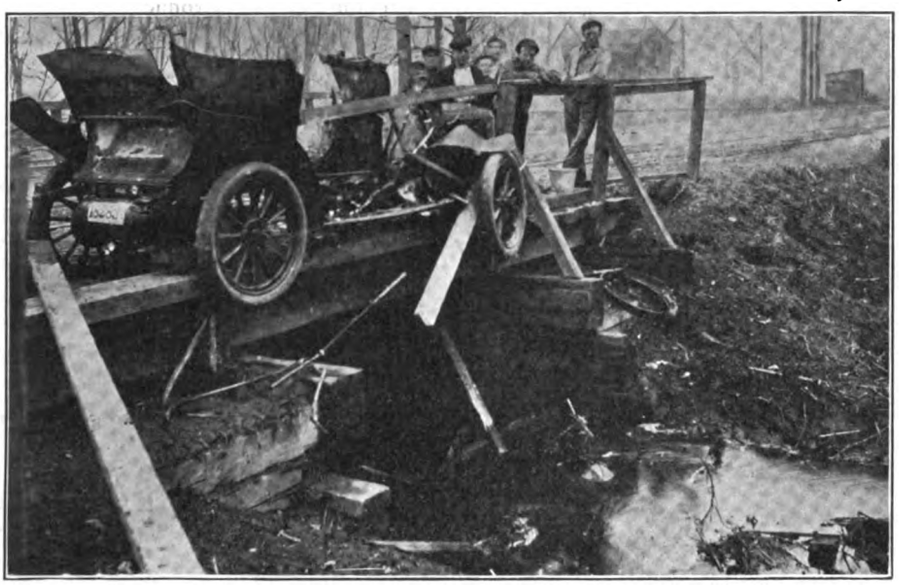
When a car is being dismantled care should be taken to so mark the parts that their relation to each other will be preserved in the reassembling. Before separating the gears of the timing mechanism, they should be marked either with prick punch or paint so that, when again assembled, the meshing of the teeth will be the same as before and the action of the valves and spark will be harmonious. Bushings also should be marked so that the two halves of the same set easily will be found, and the relation of the upper and lower half maintained. Should one-half of a bushing be turned, i. e., the left end be to the right or vice versa, it is probable that the shaft either will be loose or too tight, all of which can be avoided by marking the parts before they are separated.

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WHERE MANY HAVE MET DISASTER

Bridge at Kearney a Constant Menace to Motorists—Two Typical Accidents that Happened There.

While the necessity of keeping a car well under control at all times is realized by drivers who have had even but little experience, road conditions occasionally are encountered where more than ordinary caution must be taken if accidents would be avoided. One of the danger spots where many serious accidents have occurred is on the old turnpike road at Kearney, between Newark and Jersey City, N. J. There is a bridge at Kearney at the end of the paved road, where the turnpike road begins. The bridge is much narrower than the roadway, and has been the scene of several serious accidents, at least one of which have resulted fatally. Two of the accidents are here pictured.



FLIMSY RAIL ON KEARNEY BRIDGE

Owing to the proximity of this spot to the Jersey meadows, which are nothing but swamps, the approaches to the bridge frequently are hidden by fog, and as the railings on either side of the bridge approaches have been destroyed by cars running into them, the location is one of particular danger. The greatest care is necessary in driving across the meadows and approaching this bridge. In foggy weather and when driving at night, the danger is increased and the approach to the bridge should always be made at a slow speed and with the driver exercising extreme vigilence.



THE BRIDGE WITHOUT ANY RAIL

Police to Clear Minneapolis Streets.

In leaving their cars at the curb in front of office buildings for long periods, many Minneapolis automobilists have unwittingly violated a stringent city ordinance, which prohibits machines from being left standing on downtown streets for more than 20 minutes at a time. The police have commenced an active crusade under the terms of the ordinance.

Status of New Jersey Registration.

Despite the fact that it was announced that under the amended New Jersey law, registrations issued last year remain good for one year from their respective dates, some of the minor officials appear unaware of the situation and hold-ups of automobiles have resulted. In order to clear the atmosphere, J. B. R. Smith, New Jersey's Commissioner of Motor Vehicles was asked for a ruling, which request brought the following reply:

"The amendments do not change the time of expiration of licenses, except that it provides that all licenses shall expire on December 31st. Any license in effect at the present time will remain in effect until its expiration according to the old law; that is to say, if a license was issued in July, 1907, it will expire in July, 1908. As you will observe, the wording of the new law does not provide for annual registrations. It provides that all registrations shall expire at one time of the year; namely, December 31st, and that registrations shall be issued at the statutory rates. The law does not refer to these rates as 'annual' rates, either for motorcycles, automobiles or drivers' licenses, in this respect differing from the original law."

Chicago Chief Adopts Mild Measures.

Instead of hard words and prosecution, Chief of Police Shippey, of Chicago, is employing co-operation with the prominent Chicago automobilists to secure an abatement of the speeding nuisance. He recently held an "automobile levee" at which various owners and drivers spoke and entered into his plans for having the motorists themselves report offenders in their ranks.

Motorists Suffer for Official Tardiness.

In spite of the fact that West Virginia is unable to supply the new license tags called for under its automobile law, arrest and prosecution is being waged on those unfortunate enough not to have been able to secure them. In a case before Magistrate Siebert, of Wheeling, one of the defendants was able to show a letter from the State auditor, saying that there were no more new tags on hand at present and authorizing the use of the old tag. In spite of this, Siebert has held Dr. Longwell, of Wheeling, to the grand jury because he would not agree to settle the costs.

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ON THE TRAIL OF THE GRAFTERS

Jersey Motorists to Wage War on Hold-up Constables and Magistrates—LeMassena Maps Out the Campaign.

Newark automobilists are preparing to wage vigorous war on country constables and justices of the peace who hold up motorists, accept fines and costs, and then fail to remit the proper sum to the State. That this practice has been going on is said to be well known, but up to this time no steps have been taken to prosecute. A provision of the recent amendment to the automobile law presents just the opportunity the New Jersey automobilists have been waiting for, and A. B. LeMassena, secretary of the New Jersey Automobile and Motor Club, has evolved a scheme by which he states that he hopes to "put an end to the grafting," and, at the same time, to make it less an object with certain officials to subject automobilists to unjustifiable annoyance.

Le Massena is having printed cards which will be distributed to all members of the Newark organization, as well as to members of other clubs in the State. Upon the cards is intended to be recorded all the details regarding arrests, whether made legally or not, whether charge was justified, whether fine was paid, and if so, by whom the payment was witnessed, and so forth. Automobilists who are arrested are requested to send the cards to LeMassena with the record fully made out in accordance with the forgoing list of facts to be specified.

At regular intervals he will take the cards to Trenton and go over the records of the Department of Motor Vehicles in his official capacity as deputy commissioner of motor vehicles. He will then compare his records of automobile fines with those collected and turned in by country justices. If in any case it is found that a justice has not turned in the amount collected within the time limit set by the amendment to the Frelinghuysen law, the New Jersey Automobile and Motor Club will immediately start proceedings against the grafting official and states that it will do its best to have a prison sentence imposed, inasmuch as the penalty for withholding money from the State is now a misdemeanor.

"Many a motorist when he is out with a party of ladies," said the New Jersey club's secretary, "has been stopped by a constable and informed that he was exceeding the speed limit, or had disobeyed some imaginary provision of the law. Nine times out of ten the motorist knows he has not been breaking the law, but rather than submit the ladies in his party to discomfort, he hands over five or ten dollars, which the constable says is the fine. No record of the transaction has been made and the constable is so much in pocket. This sort of thing is going on, as well as failure by country justices to turn in fines perhaps legally collected. This is another form of graft which we are determined to stamp out, and we shall do our best. No official who is honestly striving to enforce the law need fear trouble, but those who are trying to graft will get all they are looking for."

Columbus will Adopt Road Rules.

Following up its reorganization the Columbus Automobile Club, Columbus, O., is taking a hand in shaping local legislation affecting vehicle traffic in the streets of that city. At the request of the club, C. E. Ellis has introduced in the Council an ordinance that regulates everything on wheels except baby carriages and wheelbarrows. Most of the rules are such as are in force in New York and other large cities, and known as rules of the road. Among them is one that prohibits vehicles at all times from running closer than four feet to the running board of street cars. When vehicles are stopped the right hand side always must be next to the curb, and if the stop is made on the left-hand side of the street the driver must make a complete circle if necessary to bring the right-hand side of the vehicle to the curb. Vehicles will not be permitted to stand within 20 feet of the entrance to a theatre or public hall, except to leave or receive passengers. There are some rules especially adapted to conditions in specied sections of the city. The ordinance includes a provision that no rider of a bicycle shall carry along a child under five years old. Violations of the ordinance are punishable by a fine of from $5 to $25, or imprisonment for not over 30 days, or both.

More Names on Ferry Blacklist.

Since the Long Island Railroad Co. posted in its ferry house a list of offending automobiles and refused them transportation on the boats plying between New York City and Long Island City, because the drivers ignored the rule which requires that the motor in a car shall be stopped as soon as the vehicle comes to a stop on the boat and shall not be started again until the boat is fast to the opposite slip, there has not been so much violation of the rule. That the Long Island Railroad Co. is determined to break up the habit of cranking up before the ferry boats are tied up is shown by the new list of numbers that will be refused transportation. The latest list includes machines belonging to the following persons: F. H. Tucker, Brooklyn; H. W. Andrews, Mineola; C. S. Alcott, New Haven; Mrs. S. W. Duncan, Night Service Co., Lawrence Gourlay, Alden N. McMertry, H. A. Thamsan, National Taxicab and Service Co., and Charles N. Stewart, New York City. Several of the owners who were on the first list have since made their peace with the railroad company and they may now use the ferries for the transportation of their cars.

RULES OF THE ROAD IN BROOKLYN

Traffic Squad Under Orders to Enforce Them Impartially—Abuse of the "Red Cross" to be Checked.

Instructions recently issued to the police traffic squad of Brooklyn, N. Y., by Borough Inspector Flood, will, if carried out, give automobilists equal privileges with horse drawn vehicles. While it long has been the custom to rigorously enforce the traffic rules in their entirety insofar as motor cars were concerned, the drivers of other vehicles have been required to pay little or no attention to the regulations, with the result that heavy trucks, hay wagons and horse drawn vehicles generally have wandered all over the roadway, making it impossible for law abiding drivers to overtake and pass a vehicle on its left side.

One of the mont important directions given to the men was in reference to lights. The policemen were instructed that every vehicle must carry a light after sundown, and where this law is not obeyed, the driver must be arrested.

The subject of "red crosses" on doctor's vehicles was taken up by Inspector Flood, and the police were told that these crosses were without significance, so far as the police were concerned, and that motorists who displayed the emblem were no more entitled to special privileges or a high rate of speed than any one else.

In the new traffic rules there are interesting definitions, as per the following extract from the police order:

Article X.—Definitions.

Section 1. The word vehicle includes equestrians, led horses and everything on wheels or runners, except street cars and baby carriages.

Sec. 2. The word horse includes all domestic animals.

Sec. 3. The word driver includes the rider and driver of a horse, the rider of wheels and the operator of a motor vehicle or street car.

"Making the Punishment Fit the Crime."

Magistrates in Brentford, England, have adopted a novel method of fining convicted scorchers. By the new formula, which has at least the merit of originality, the culprit is assessed at the rate of $5 per mile for each mile in excess of the legal limit; hence the man convicted of driving at the rate of 23 miles per hour pays $10 more than the driver who was going but 21 miles.

Ohio Motorists Demand Safe Streets.

By threatening to bring suit for damage to their machines the automobilists in the vicinity of Sharon and South Sharon, Ohio, hope to scare the local councilmanic bodies into putting their streets into passable condition. Petitions presented to the councils specify many troubles.

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DOUBLE THERMO-SYPHON COOLING

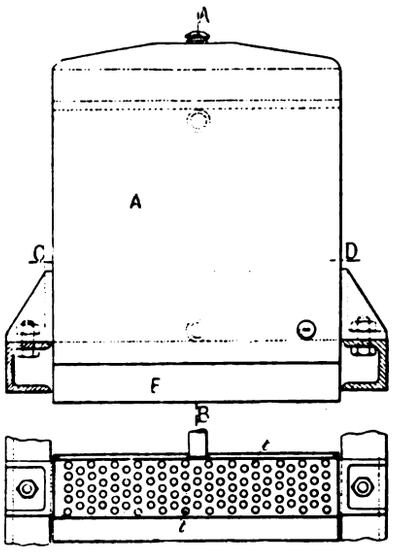
New System that Eliminates the Pump and Fan—Self-Induced Circulation of Air and Water.

It might be supposed that the general system of cellular radiator construction in such prevalent use at the present time leaves little or nothing to be desired in the way of furnishing an adequate reduction in the temperature of the jacket water. At the same time the use of the circulating pump and fan serves to absorb a certain amount of power which, if not so utilized would be a useful adjunct to the output of the machine. On this account, considerable interest attaches to the Caisso system, recently introduced by an inventor of that name, of Saint-Denis, France. Its most striking features are that it designs to eliminate the use of both fan and pump, at the same time ensuring a thorough and systematic circulation of water and air, whether the vehicle is at rest or in motion.

Contrary to the usual practice, the air is passed through the radiator vertically. This involves a reduction in the section of the air passages and a consequent increase in the velocity of the air for the same cooling effect. Also it provides for a thorough utilization of the difference in temperature between the air and water, such as is not always possible with the ordinary systems. Briefly, the principle of the thermo-syphon circulation, already used to no small extent on the water side of the system, is applied not only to the water, but to the air as well. This effect is employed whether the car is stationary or moving. In addition to this, when the car is in motion, the funnel-like orifice of the cold air intake serves to produce a forced draught through the air tubes, corresponding to the blast on the ordinary radiator front, while a slight amount of draught induction also is secured by displacement through the closed hood.

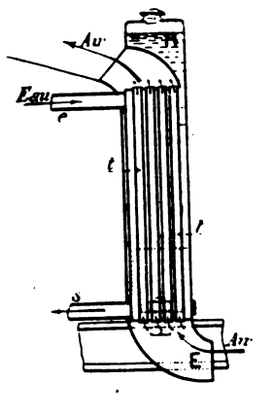
From the accompanying illustrations the general construction will be readily apparent. The casing A, containing the water, is closed at top and bottom with a couple of tube sheets, holding the small tubes, t-t, through which the air is permitted to circulate. In addition to this, a false wall at the back, provides a thin, annular passage over the entire rear wall of the water container through which a proportional amount of air is circulated, and which secures for the rear wall a cooling effect corresponding to that which is secured for the front by the direct blast of the air. The water compartment is equipped with the usual filling and overflow apertures, and with outlet and inlet connections at bottom and top.

The hot water entering at the top has a perfectly free course to the bottom, and is gradually cooled, meeting with cooler air as it drops until at the very bottom it encounters the cold air directly at the intake. This arrangement serves a double purpose. The water being gradually cooled, tends to fall, thus establishing the thermo-syphon circulation in the cooling system, while the air, being gradually heated, tends to rise, thus establishing a similar thermo sy-



phonic movement in the air passages. As a result of this, the cooling continues uninterruptedly even when the car is at rest, and the straight, unimpeded passages for both elements aid by offering no hindrance to the flow.

The air discharged from the radiator is carried over the top of the motor just below the top of the hood. It is therefore free from hindrance and offers no impediment to the chimney effect upon which the circulation depends. Further than this, when the car is in motion, the suction created by its own displacement of the outer air creates a certain amount of induction within the hood which tends to increase the



effect produced by the direct impact of the air upon the flare front of the intake.

Temperature conditions being practically the same on both sides of the radiator, it would appear that what applies to the water must hold equally well with the air. On this assumption the success of this double thermo-syphon principle seems assured.

WHAT THE CHASSIS MAY INCLUDE

Laxity in the Common Understanding of the Word—Makers Vary Widely in Definition and Practice.

Excepting the ubiquitous and thoroughly offensive word "chauffeur," probably the French language has contributed no technical term of wider adoption where automobile English is spoken than the all-inclusive "chassis." Originally signifying a sash or frame, and in the language of the carriage maker an underframe, it has come to be understood as covering almost everything except the body. That there is considerable laxity in the common understanding of the word, however, was developed by the correspondence of an English manufacturer who for business reasons desired to learn exactly what was implied by the term.

Inquiries of four Continental makers elicited the following replies:

"The term chassis includes step-irons to carry the platform steps, also lamp brackets; but does not include footboards, steps to carry mudguards, or mudguards—all these being coach work."

"The step-irons (les ferrures), the platform steps, mudguards, and lamp brackets are not included in our chassis, this being the general custom on the Continent.

"The term chassis includes the chassis complete with tires, and we deliver with it a tool kit complete, containing all the necessary tools for the chassis, and a Michelin 'Necessaire,' with the pump for tires. Mudguards, mudguard stays, step-irons, etc., are not included in what we term the chassis."

"The term chassis includes two front mudguards with stays, also set of standard plain tires, and footboards down to the pedals; no step-irons or lamp brackets are included."

The English makers consulted, proved to have opposite views in regard to the external features which appear to be in question. "We understand," said one, "the complete chassis to include footboard, mudguards, lamp brackets, wiring and switch."

"The term chassis—as far as our —— chassis are concerned—does not include stays to carry mudguards and mudguards," the other asserted, "but only sockets for the front mudguards and short stumps for the stays; step-irons are not included. One front footboard is included, also two side lamp brackets and one tail lamp bracket."

Coasting to Scavenge the Cylinders.

When descending hills it is a good plan to cut out the spark for a while, and to leave the clutch seated. The action of the pistons, when the charge is not being exploded will tend to clean out the cylinder and to cool it. Before reaching the bottom of the hill throw on the spark and the motor will resume its work.

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ELECTIONS HELD BY MANY CLUBS

Three New Organizations Added to the Growing List—Rush County Gets Together at Rushville.

These officers have been elected by the Automobile Club of St. Louis, Mo.: President, Alexander Euston; vice-president, E. M. Senseney; secretary-treasurer, Sam D. Capen; governors, D. R. Francis, C. H. Huttig, C. W. Nugent, Roy F. Britten, D. R. Calhoun, Sam D. Capen, Alexander Euston, A. B. Lambert, H. S. Priest, J. A. Seddon, E. M. Senseney, and G. M. Wright.

C. J. King, having refused to consent to be re-elected as president of the Ashtabula (Ohio) Automobile Club, W. H. Morrison was chosen as his successor at the annual meeting recently held. The other officers chosen were: vice-president, R. P. Reidenback; secretary, W. W. Scott; treasurer, J. H. Goddard; the last two were re-elected.

The Cheshire County Automobile Club, with headquarters at Keene, N. H., has been formed with the following officers: President, Dr. I. J. Pronty; vice-president, W. H. Goodnow; secretary, Edward H. Lord; treasurer, Frank J. Bennett; directors, F. A. Wright, J. A. Toof, and D. W. Goodnow, in addition to the four officers.

W. R. McKeen was elected president of the Omaha (Neb.) Automobile Club at its annual meeting, last week. Other officers chosen were as follows: Vice-presidents, Frank Parmalee and Frank Colpetzer; treasurer, Gould Dietz; secretary, Lee McShane; directors, Louis Nash, Arthur Gioui, Thomas Fry and H. L. Cummings.

W. L. Snow was elected president of the Bloomington (Ill.) Automobile Club at its annual meeting last week. The other officers chosen were; Vice-president, Samuel P. Irwin; secretary-treasurer, Charles W. Dietz; directors, F. H. Cole, Howard Greenness, Dr. J. W. Kasbee, W. L. Martin and J. L. Murray.

Niagara Falls now has an automobile club of its own, an organization meeting and election having been held last week. The officers are: A. G. Porter, president; Colonel David Isaacs, vice-president; R. Max Eaton, secretary-treasurer; directors, Mrs. Martha Flagler, J. T. Williamson, H. A. Francis, Jr.

Answering the call to meeting with a rush, Rush county automobilists have formed a club, said Rush county being in Indiana, and the place of meeting being Rushville. The president is Dr. Frank Green, and the secretary, J. T. Arbuckle, while Rich Reed's name won him the treasurership.

Officers have been elected by the Lawrence (Mass.) Automobile Club, as follows: President, J. Frank James; vice-president, Walter Coulson; secretary-treasurer, Harry K. Lawrence; directors, Dr. Charles G. Pierce, James C. Forbes, and Albert S. Lang.

John P Coughlin was unanimously re-elected president of the Worcester (Mass.) Automobile Club at its recent annual meeting. Charles A. Harrington was chosen vice-president; George E. Stimpson secretary, and Herbert P. Bagley treasurer.

East Orange "Sunday Closing" Attacked.

Motorists and garagemen are not the only people in East Orange, N. J., who are inconvenienced by the new city ordinance which prohibits Sunday selling. They, apparently, have accepted the situation as one from which there is no escape. But the ordinance is not to stand unchallenged. Francis J. Purssell, a local caterer, applied to Chief Justice Gummere on the 16th inst., for a writ of certiorari to review the action of the Common Council in passing the ordinance. Purssell, who long has been making Sunday deliveries of ice cream, aggregating about $16,000 per year, represented by his counsel that if the commodity is not consumed within a few hours after being packed for retail consumption it not only deteriorates, but, in many cases, poisonous germs are formed within it, and its use becomes a grave menace to the health of the consumers thereof. At the direction of the Chief Justice the application was held over for a week. The ordinance, as stated in the Motor World last week, inconveniences automobile owners who have no means of storing gasolene on their own premises, and it is a cause of considerable loss to garagemen, whose Sunday sales for this same reason are large.

Nova Scotia May Have "Closed Days."

In Nova Scotia all automobile owners should study law, or be prepared to be hung at any time. The Nova Scotia House of Assembly recently passed a law, affecting automobilists, of which the following section is a choice bit:

"It shall be lawful for every city, town or municipality in the Province of Nova Scotia, to make regulations prohibiting the use and operation, on certain days of each week, of motor vehicles, upon any of the public highways of such city, town or municipality, and providing penalties for any violation of said regulations."

Boston Aims to Have Fair Road Rules.

In order to give full justice to the drivers of motor cars, the commissioner of streets in Boston is holding hearings for the purpose of determining what are fair regulations to impose on the conduct of street traffic in the city. Under a new law passed by the last Massachusetts legislature, the commissioner is given the power to formulate and enforce such rules and regulations, but before doing so he is getting as much expert testimony and as many ideas as possible from horse drivers, street car companies and automobilists.

OHIO'S AUTOMOBILE LAW SIGNED

Takes Effect June 11th—Graduates License Fees—Requires Motorists to Yield Two-thirds of Road.

Governor Harris, of Ohio, signed the new automobile law, known as the Ward automobile bill, on the 12th inst., and it goes into effect on June 11th. One of its results will be a diminution of the revenues of those cities and towns in Ohio that have been exacting license fees from owners of motor vehicles. The new law repeals all local ordinances under which this tax has been imposed, and it prohibits any future enactments of similar character.

The new law requires the registration of all automobiles by the Secretary of State, the scale of fees being $3 for cars up to 12 horsepower; $5, up to 20 horsepower; $10 up to $50 horsepower, and $15 for higher powered machines. Dealers get special licenses for $10 for each type of car. Owners must carry their certificates of registration with them, and the driver of a borrowed automobile must carry the written consent of the owner. Chauffeurs must register at a cost of $2 for license. Non-resident owners must only comply with road rules and the regulations concerning equipment, if they are registered in their own states.

License numbers must be displayed front and rear on machines. Bells, horns and brakes are required, and lights displayed must illuminate the license number.

The road rules require that the motorist must slow down and stop when signaled so to do by the driver of a horse vehicle. Also he must give two-thirds of the road to persons with horse vehicles whom he meets.

Motorists arrested are to have right of immediate hearing or of giving bail not to exceed the maximum fine for the offense charged. The Secretary of State is to register cases of arrest and conviction and notify all county clerks of the same.

Penalties are provided as follows: Fines of $25, $50 and $100 and 30-day sentences are provided for first, second and third violations of registration, speed, equipment and road rules section of law. Using fictitious license number or one belonging to another draws fines of $25, $50 and $100 with 60-day sentences, according to the offense. Failure of chauffeurs to register draws fines of $50 and $100 and suspension of right to be registered for two years. Failure to show written consent from owner for use of machine draws penalty of $200 fine and six months' sentence. Revenues derived under the provisions of the law are to be used for maintenance and repair of roads.

It is estimated that there are about 25,000 automobiles owned in the State of Ohio. The apportionment of road money among cities and towns will, it is thought, offset the loss of revenue from local license fees.

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The Week's Patents.

881,502. Mechanical Movement. Elihu Thomson, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed April 26, 1906. Serial No. 313,734.

1. A driving and driven element, in combination with a flexible member having different axes and arranged to transmit motion between said elements, and a means for determining which axis will be active and the direction of flexure of the said member.

881,510. Friction Clutch. Lyman E. Warren and Augustus Anderson, New York, N. Y. Filed March 12, 1907. Serial No. 361,909.

1. A clutch having a member with a friction surface, and a separate drum and an expanding band, the said drum carrying a permanent flange and an adjustable flange.

881,629. Shock Absorbing Device. Geo. R. Smith, Dover, N. H. Filed June 3, 1907. Serial No. 377,080.

1. The combination with a main compressible arched spring of an auxiliary spring with a loop which auxiliary spring is contained within the arch of said main spring, a stop passing through the loop of said auxiliary spring whereby upon the reflex of said main spring after compression thereof said auxiliary spring will engage said stop and become drawn out thereby yieldingly stopping the reflex of said main spring.

881,684. Spark Plug. William B. Hayden, New York, N. Y. Filed June 7, 1907. Serial No. 377,795.

1. A spark plug comprising an inner and an outer section, said inner section terminating at its inner end in a pair of fixed electrodes, a body of insulating material secured within said sections by the outer of said sections, an electrode rod extending through said body and provided with an integral offset abutting against the body, said rod having its inner end extending between the fixed electrodes, a plurality of nuts carried by the outer end of said rod for fixing it in position and for connecting a circuit wire therewith, a compression nut mounted upon the said inner section and independent of the water jacket of the cylinder of the engine.

881,696. Automobile Running Gear. Charles C. Keyser, Washington, D. C. Filed Dec. 13, 1907. Serial No. 406,306.

1. The combination, with the side-bars and front and rear axles of a motor car, of a counter shaft journaled in the side bars; a frame pivoted at one end to the countershaft; a spring interposed between the free end of the frame and the adjacent axle; and an engine mounted upon the free end of the frame.

881,728. Tire for Vehicle Wheels. Thomas A. Silverwood, London, England. Filed April 22, 1907. Serial No. 369,648.

1. A tire for vehicle wheels composed of material in the form of a helix of ribbon material set on edge and a filling material between the layers of ribbon material, substantially as and for the purposes set forth.

881,768. Tire Protector. Herbert M. Bradley, Fort Worth, Tex. Filed Feb. 20, 1907. Serial No. 358,365.

1. A tire protector comprising a sectional tread covering the outer face of the tire, the tread being formed of tread sections having their forward and rear ends beveled outwardly, and alternating sections having their corresponding ends beveled inwardly and facing the beveled ends of the first mentioned tread sections, and means for supporting the said treads in position on the tire.

881,771. Mirror for Motor Vehicles. Henri Cain, Paris, France. Filed Feb. 21, 1907. Serial No. 358,557.

1. A device for use in connection with motor vehicles comprising a mirror having a frame surrounding the same, a bracket having a curved slot therein, a member carried by said mirror and extending through said slot, means for pivotally supporting the opposite end of the mirror, and means carried by said bracket for securing the same to a portion of the vehicle.

881,773. Vehicle Spring. John S. Clark, Island City, Ore. Filed Aug. 8, 1906. Serial No. 329,683.

1. The combination with a vehicle spring and its lower support, of brackets extending one from the top of the spring and the other from the said lower support therefor, the brackets located at the central portion of the spring, a frame having a sliding connection with both brackets, and a spring carried by said frame, which spring is placed under compression as the main spring is unduly compressed or expanded.

881,800. Carburetter for Internal Combustion Engines. Syndey A. Horstmann, Bath, England, assignor of one-sixth to Albert Horstmann, one-sixth to Gustav Otto Henry Horstmann, one-sixth to Ernst Hermann Horstmann, one-sixth to William Thomson Edgar, Bath, England, and one-sixth to R. A. Lister & Company, Limited, Dursley, England. Filed Dec. 3, 1906. Serial No. 346,140.

1. In a carburetter for internal combustion engines, the combination with a mixing chamber, of an iris diaphragm arranged

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in the lower part of said mixing chamber and having the inner edges of its leaves thinned so that the vibrations of the same caused by the passage of air atomizes the fuel.

881,846. Power Transmitting Mechanism. Frederick R. Burch and Charles E. S. Burch, Seattle, Wash. Filed June 11, 1907. Serial No. 378,351.

1. In combination with the power shaft, a driving wheel on said shaft, two discs adapted to be frictionally driven by said wheel, a pair of toothed pinions rotated by the respective discs, an axle carrying said discs and pinions and furnishing a support for a driven shaft, a pair of toothed gears engaged with both the said pinions, and means for effecting such engagement.

881,862. Electric Ignition Apparatus. Russell Huff, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Original application filed Dec. 22, 1906. Serial No. 349,190. Divided and this application filed May 31, 1907. Serial No. 376,547.

1. In an ignition apparatus for multiple cylinder hydrocarbon engines, a distributor comprising a traveling brush and a series of separated contacts over which the brush travels in succession, said brush being provided with means for transmitting current through each contact in turn while the forward part of the brush is traveling over a portion of the succeeding interval between contacts, for the purpose set forth.

881,892. Automobile Lamp. Louis Bleriot, Paris, France. Filed May 12, 1905. Serial No. 260,139.

An apparatus for the lighting of automobiles and other appliances, comprising a holder, a burner thereon, said holder acting as a support for a tablet of oxid of rare earth and acting as a heater by recuperating the heat given off by the flame of the burner, said burner comprising two separate chambers placed one above the other, pipes for introducing respectively oxygen or compressed air and the vapors of a combustible liquid into said chambers, the pipe from the liquid passing through the holder so that said liquid is volatlized by the heat of the holder, a passage leading from the chamber for the combustible vapors directly to the burner, and a pipe leading out from the oxygen or air chamber through the chamber for the combustible vapors and into said passage so that the current of oxygen or air exhausts the vapors in the first named chamber and mixes with same in the burner.

881,905. Armor for Pneumatic Tires. Frederick Q. Creiger, Chicago, Ill, assignor of one-half to Charles H. Edgcomb, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,704.

1. The combination with a pneumatic tire of an armor comprising a series of sections of bent wood conforming to the curvature of the tread of the tire and extending to a point inwardly beyond the greater diameter of the tire and clamping the tire in such a manner as to maintain them in their operative position thereon, substantially as described.

881,909. Wheel. Marshall D. Drake, Beard, Ky. Filed May 18, 1907. Serial No. 374,368.

1. The combination in a wheel, of a rim, a tire comprising a continuous cover held by the rim and resilient, inflated compartments arranged in the continuous cover; some of said compartments having sockets in their inner portions the inner ends of which sockets are closed whereby the same are isolated from the interiors of their respective compartments, and spokes extending through and bearing against the inner side of the rim and also extending radially outward beyond the rim and arranged in the said sockets of the inflated compartments and bearing against the end walls of the sockets.

881,948. Elliptic Spring. William G. Price, New Castle, Pa. Filed Aug. 18, 1906. Serial No. 331,141.

An elliptic spring comprising a plurality of complete springs each composed of a plurality of leaves, said springs being placed one within the other and being in contact only at their middles, the leaves of the inner spring or springs being thinner than those of the outer spring.

882,003. Electrical Igniting Apparatus. Edward S. Huff, Detroit, Mich., assignor to Henry Ford, Detroit, Mich. Filed July 1, 1906. Serial No. 267,923.

1. In an electric igniting apparatus, the combination with an induction coil, of a condenser having its opposite ends connected with the opposite ends of the primary, one of said connections being formed through two branches, one of which includes a source of electricity and forms part of a charging circuit and the other of which forms part of a discharging circuit, each including the primary, and means in each of said branches adapted to periodically open and close said charging and discharging circuits, one circuit being open while the other is closed.

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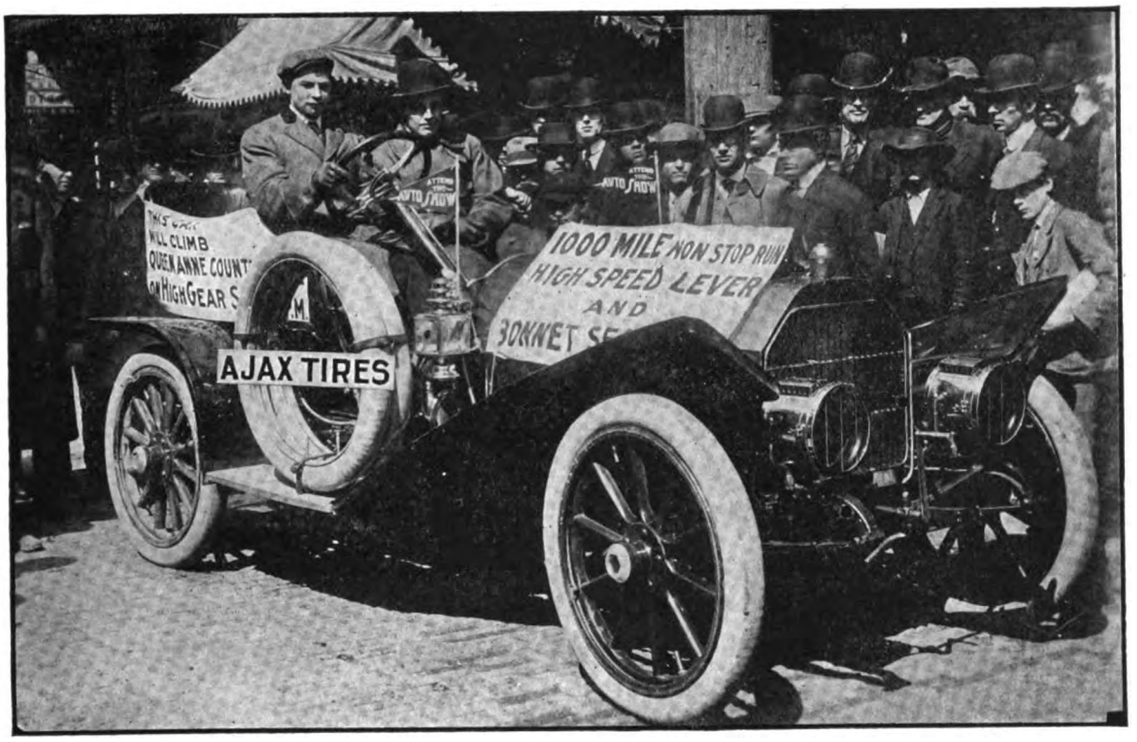
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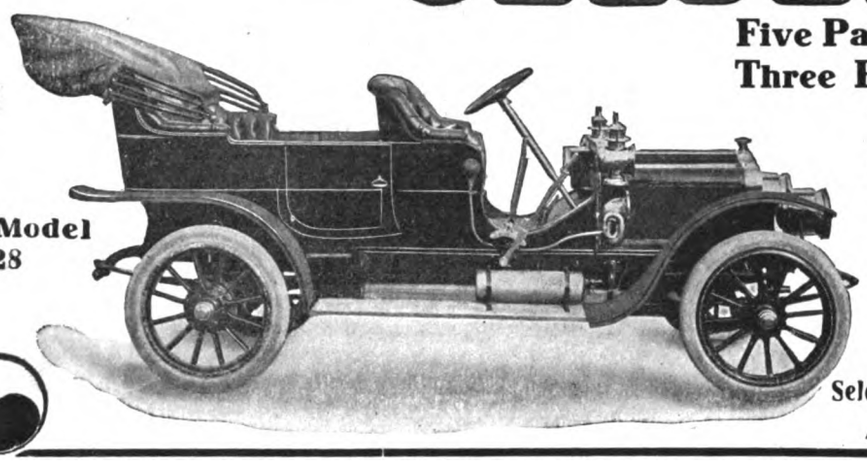
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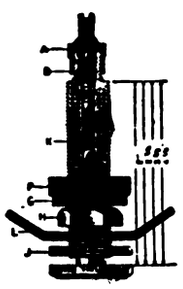
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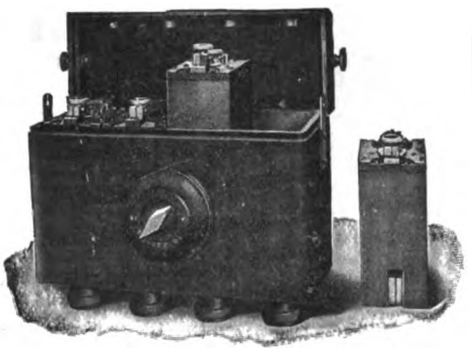
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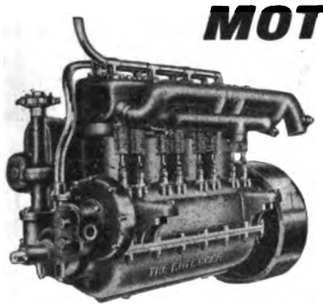


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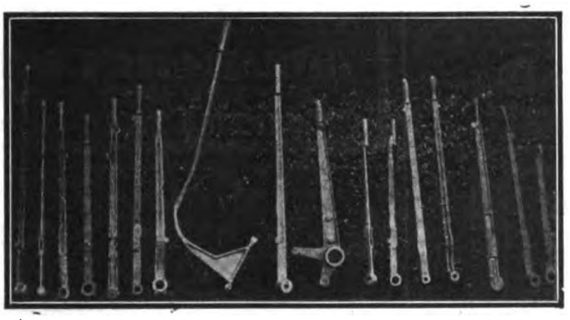
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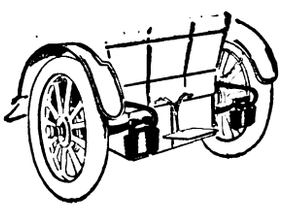


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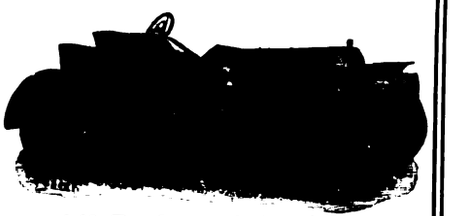
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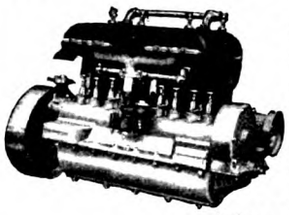
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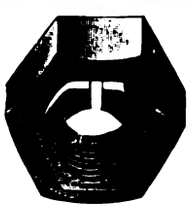
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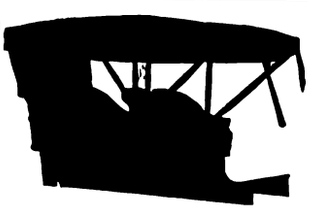
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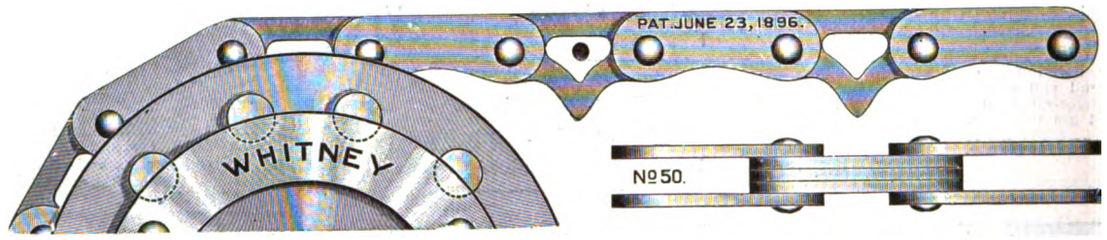
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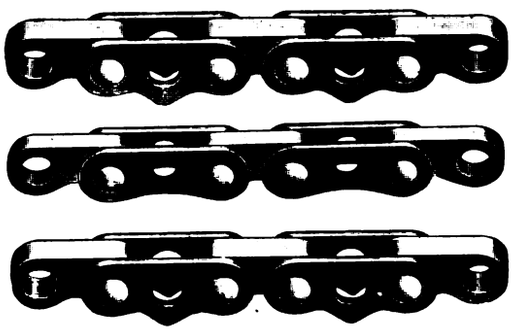
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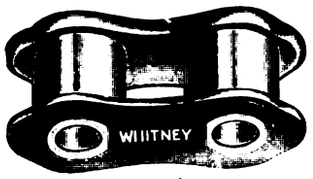
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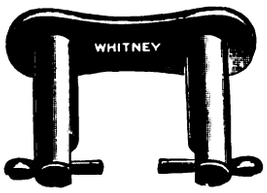




CONNECTING LINK



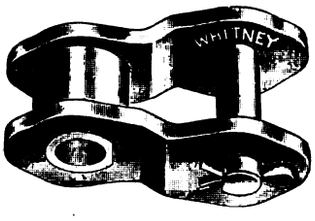
ASSEMBLED CENTER BLOCK



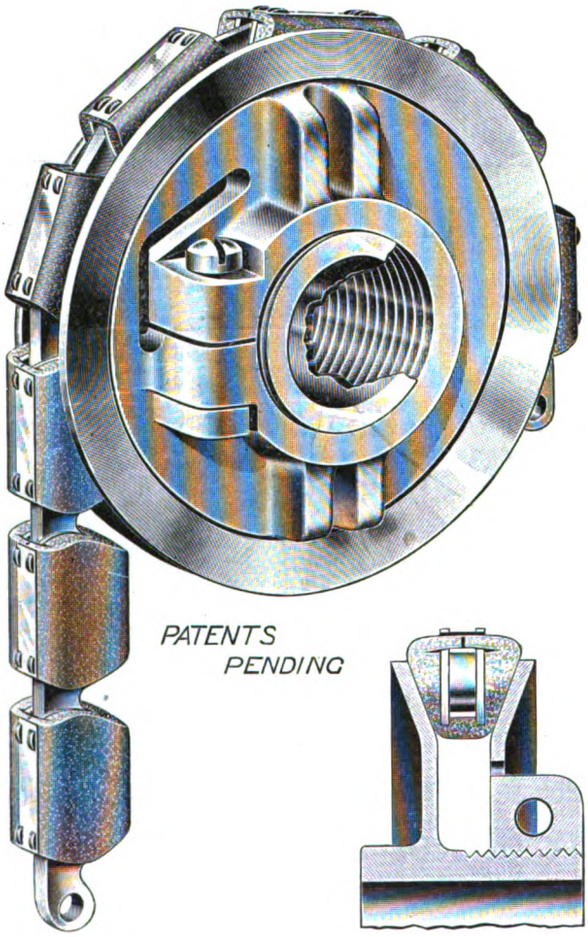
SIDE LINK with RIVETS ASSEMBLED



SIDE LINK PLAIN

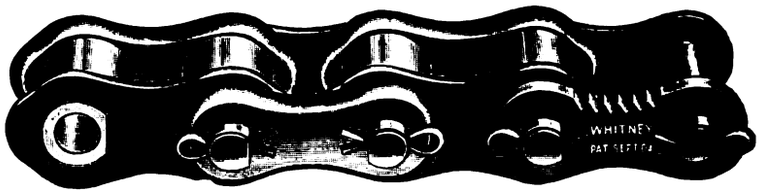


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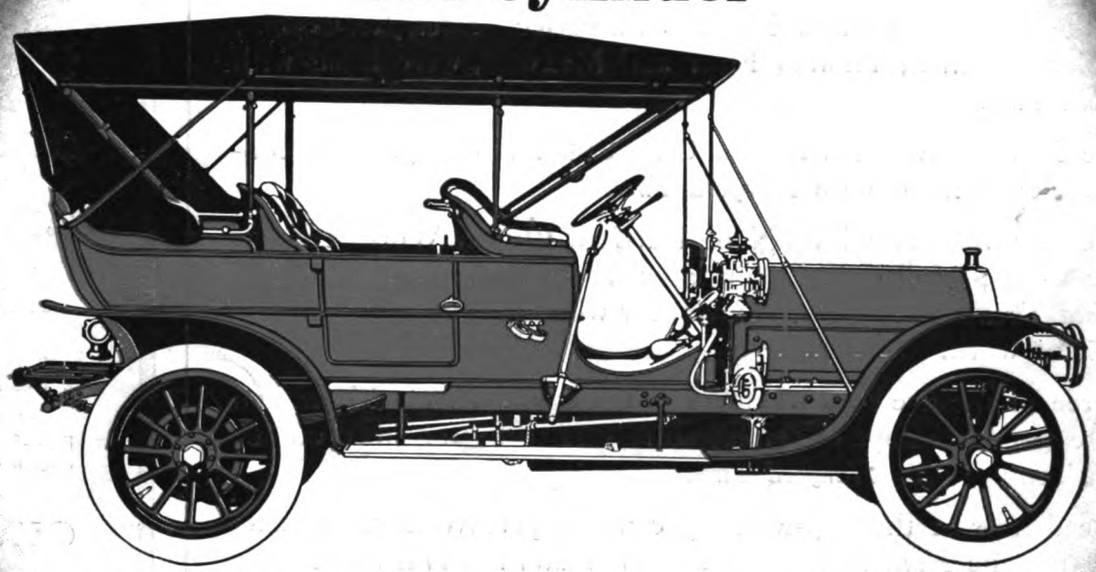
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There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

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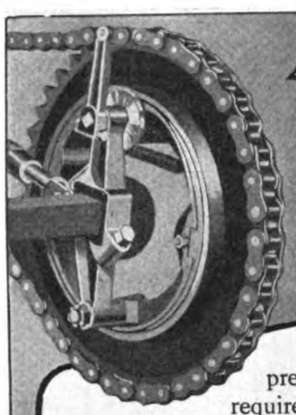
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Our guarantee to replace or repair, without cost, all damaged Bearings for one full year; to replace or repair at pro rata cost for the second and third year, means that we assume all responsibility as regards the up-keep of HB and DWF Bearings for three full years. We supply the car builder with a printed Guarantee for each car—these to be distributed to Dealer or Owner. We supply brass Guarantee plates for attachment to each car.

To the Car Dealer our Guarantee means complete protection, as he is relieved of all responsibility.

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The Hess-Bright Manufacturing Co.

2109 Fairmont Avenue

PHILADELPHIA

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



DOUBLE VICTORY IN HARRISBURG ENDURANCE RUN.

A 30 horsepower White Steamer was the only touring car to make a perfect score in the 320-mile endurance run of the Motor Club of Harrisburg, held May 4 and 5. The White was awarded the principal trophy, the Board of Trade Cup, and also the PATRIOT Cup for which four cars, including the White, tied in last year's contest. Three of last year's successful drivers competed with the same makes of cars in this year's contest and their relative performances decided the award of the 1907 trophy, the White, of course, being the winner.

The contest was run over the rough and hilly roads of eastern Pennsylvania. A 20-mile-an-hour schedule prevailed, with checking stations at intervals of approximately 30 miles. Each car carried an observer, and, in addition, all working parts were sealed. At the conclusion of the run the cars were critically examined by a committee of well known experts.

That the single White entry should have made the only perfect score in the touring car division is significant of the superior reliability and strength of construction of the White. The results of the Harrisburg contest, it should be further pointed out, were the same as in the memorable contest of the Quaker City Motor Club on January 1, 2 and 5, and in last year's struggle for the Hower Trophy, in that the single White entry proved triumphant over a large number of the leading gasolene cars.

Call and see the car in a class by itself

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. Boston, 320 Newbury St.
San Francisco, 1460 Market St. Chicago, 240 Michigan Ave.
Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave.
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Empire Tires
WEAR LONGEST

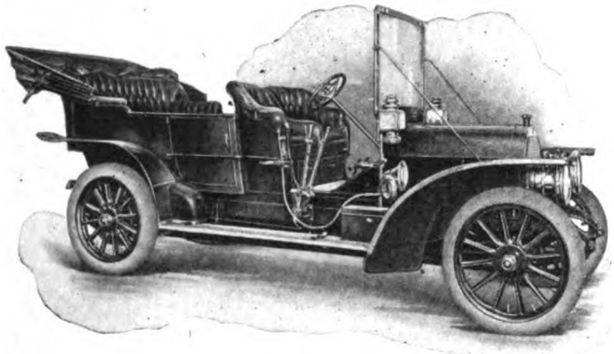
EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

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Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



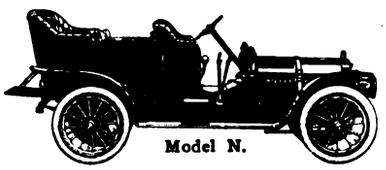
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Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with **Ball Bearings throughout, including the motor.**


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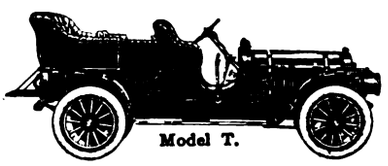
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All Nationals have two complete systems of ignition.

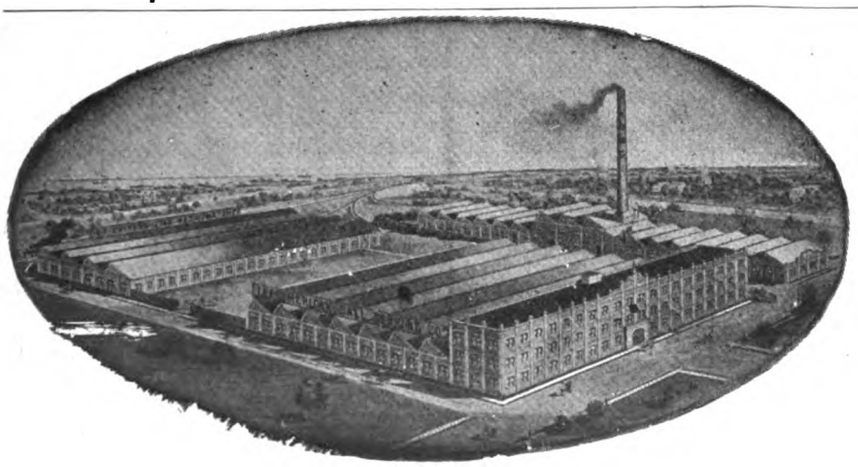
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$4,200

Model T—6 cyl., 5 x 5
$5,000


Model T.

Write for particulars and our Booklet **"What Owners Say About Their Nationals."**

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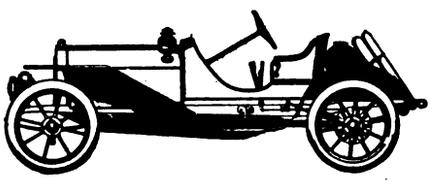
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Palmer-Singer Six-Sixty, Runabout
6 Cylinder, 60 H. P.
$2,850

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4 Cylinder, 30 H. P.
$1,950

All cars sold by us are licensed under Selden patents
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Palmer-Singer Four-Forty Seven-Passenger Touring Car
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$4,000



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28-30 H. P.
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There's only one
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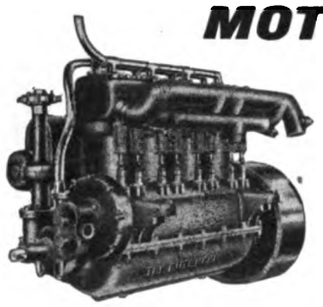
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for actual service.

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Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

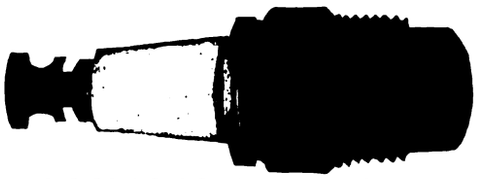
Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



The Proof of the Pudding is in the Eating

COMMON SENSE PLUG. PRICE $1.25

It is very easy for you to prove whether the claims for excellence of **SPLITDORF IGNITION APPARATUS** are real or whether they are mere talk.

Just give it a fair trial on your car—that's all.

You will soon discover an absence of ignition troubles and a reliability and efficiency that will make you its friend.

C. F. SPLITDORF, Walton Ave. & 138th St., Branch, 1679 Broadway **NEW YORK**



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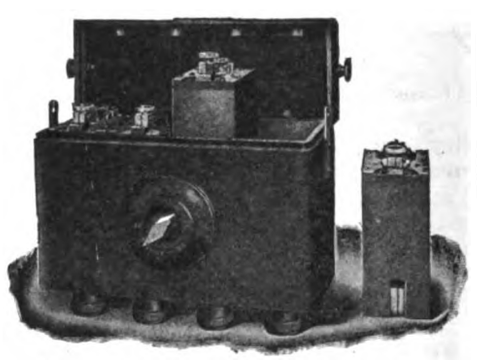
Provide SPRING INSURANCE and SPRING COMFORT.

Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

Let us send you our interesting booklet, and ask your dealer about them.

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4555 Delmar Avenue, St. Louis, Mo.
New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.



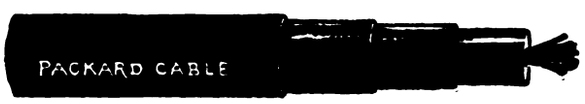
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HEINZE ELECTRIC CO., Lowell, Mass.

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If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF.

Samples and Prices on Request.

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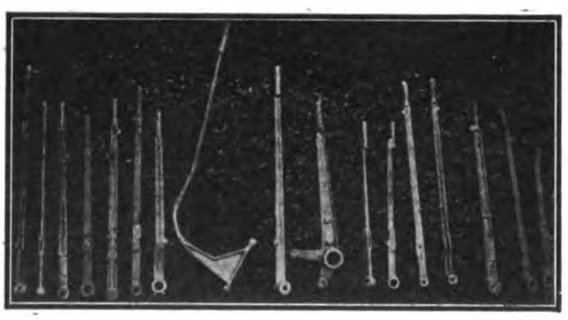
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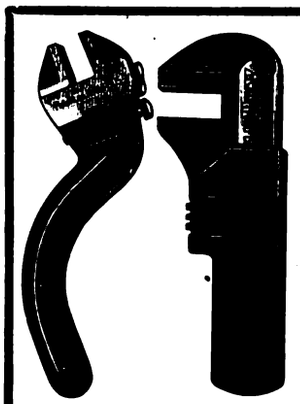
A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

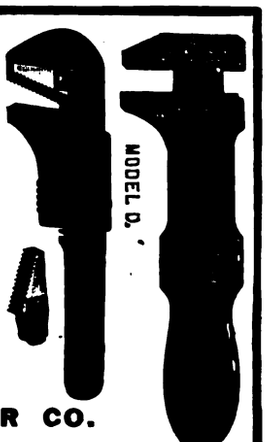
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Sole Makers
THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.



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HARTFORD, CONN.

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Mayo Radiators Make a Good Car Better and Their Use on a Car is a Hall-Mark of Quality.

¶ Mayo Radiators are made in a quality shop. In their construction no expense is spared, no crude methods obtain. In their use complete satisfaction results.

¶ Mayo Radiators perform their functions well under all conditions—and conditions at times are exacting. It is at just such times that Mayo quality asserts itself.

¶ The engineer can eliminate possible radiator troubles from his calculations by the adoption of the best possible radiator. The test of years and use has proved that we make it.

¶ Our capacity limit on new contracts is rapidly being reached.

MAYO RADIATOR COMPANY, New Haven, Conn.

All Roads Alike



You can travel over any road —no matter how rough if you have Gabriel Shock Absorbers attached to your car.

Friction is gradually applied in proportion as shock becomes greater—makes riding smooth and easy—saves tires and springs —the only shock absorbers that allow free play of springs up to their elastic limit.

Attached to any car or spring.

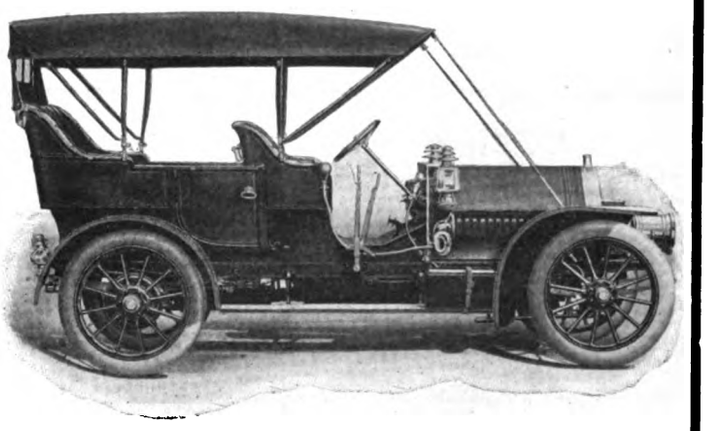
Ask for The Gabriel Horn, Cut Out Valve and Shock Absorbers on your 1908 car.

Write for description and prices.

GABRIEL HORN MFG. CO.
1417 East 40th St., Cleveland, Ohio

THE "JEWEL 40"

THE "NON-SKIDDING" CAR



Compare following specifications with other cars at $3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY
234 Walnut Street, - Massillon, Ohio, U. S. A.

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Rambler

Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any $4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., $1900

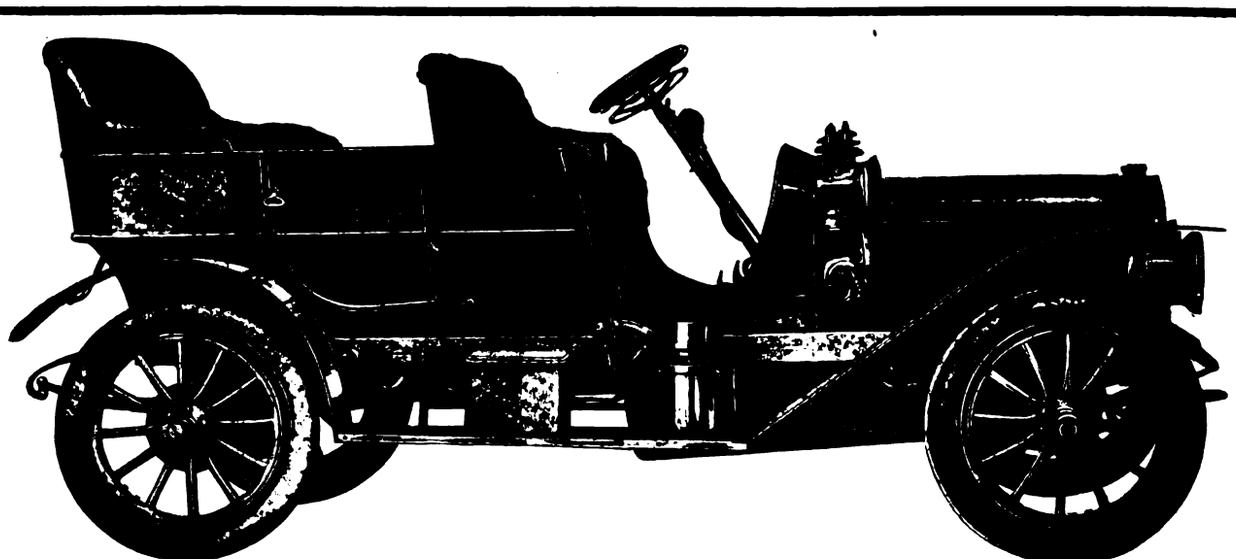
Write today for special circular aescribing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, May 28, 1908. No. 9

CAMPAIGN AGAINST TRADE ABUSES

Opening Gun Fired at Cleveland Meeting of Tire Makers—First of a Series of Manufacturers' Conferences.

It transpires that the meeting of tire manufacturers, which occurred in Cleveland oh Thursday last, is the first of a series of conferences which will be held by the various interests represented by the Motor and Accessories Manufacturers, Inc.

All of these meetings will have for their object the correction of the abuses due to prevalence of fictitious list prices and excessive and elastic discounts to which the Motor World called attention some two months since. As was then stated, the "fancy figures" had caused semi-demoralization in the accessory business. Every other jobber and dealer had his own list price and his own selling price, and the so-called "discount houses," were juggling figures in a nimble-witted fashion wonderful to behold. Even the Automobile Club of America established a cut-price store of its own. Dealers who were not price-slashers or figure jugglers, have been buying to meet only their immediate needs.

At the Cleveland meeting of the tire makers there was no inclination to mince words in dealing with the situation. The disposition existed to assist and encourage the legitimate automobile dealer, who, as one of the speakers stated, must sell tires and other accessories to make ends meet. If he fails to realize this truth, the business must fall into the hands of department stores and other not wholly desirable channels. The manufacturers present admitted the necessity of reducing the discounts, the consensus of opinion being that a flat discount of 15 per cent. is about proper and will tend to correct existing abuses. The dealers will be circularized on the subject and another conference will he held on July 5th, when replies will be considered and definite action taken.

The Motor and Accessories Manufacturers already had asked the Association of Licensed Automobile Manufacturers and the American Motor Car Manufacturers Association to join with them in eradicating the evils and each of those organizations has appointed a commitee for the purpose. Messrs. Clifton and Davis represent the A. L. A. M., and Messrs. Briscoe and Mora, the A. M. C. M. A.

Alexander and Elyea Part Company.

The Alexander-Elyea Co., Atlanta, Ga., a co-partnership and probably the largest and best known jobbing house in the South, has been dissolved by mutual consent. Mr. Alexander has purchased the firm's Jacksonville branch, while C. L. Elyea takes over the Atlanta business, which will be continued by a corporation, the Elyea-Austell Co., which already has applied for a charter. It will be composed of Mr. Elyea, Alfred Austell and W. C. Warren, Elyea holding the majority of the $60,000 capital stock.

Sale of Reliance Property Ordered.

The proposition of a number of Lansing (Mich.) capitalists to take over the business of the Reliance Motor Vehicle Co., Detroit, which several weeks ago was placed in the hands of a receiver, has fallen through, and the court has ordered the property sold. The sale is under a trust mortgage held by the Union Trust Co., to secure the payment of $150,000 in bonds. The inventory shows property valued at about $105,000, and it is stated that there is a purchaser ready to take the property at that figure.

Maxwell-Briscoe Offices Burned.

Fire which started in the office of the Maxwell-Briscoe Motor Co. at Tarrytown, N. Y., early Thursday morning last, 21st inst., resulted in the total destruction of the building at a loss of about $25,000. How the fire started is not known, but it is supposed to have been due to a defective electric insulation. The factory itself was not damaged.

FIRST ALCOHOL MOTOR PERFECTED

Franklin Develops Special Design for this Form of Fuel—Claim Made that It is Thoroughly Practicable.

Although it is well known that the H. H. Franklin Mfg. Co., long had been engaged in experimenting with alcohol as a fuel for the internal combustion motor, reports that had emanated from the Franklin factory at Syracuse, N. Y., scarcely had prepared the way for the authoritative announcement made late last week, that a Franklin motor, specially designed for alcohol, had been perfected.

It is stated by the Franklin people that size for size their alcohol motor is as powerful as the gasolene engine, and "thoroughly practical in every respect for automobile use." No details of its construction are given. It is stated that 90 pounds compression is used—which is ample for automobile practice—as against 150 pounds used by the United States Government in its tests and yet "the results of the Franklin motor equal the Government tests." It is asserted also that it renders alcohol as economical as gasolene with both at the same price per gallon. It shows a consumption of alcohol per brake horsepower hour of about 1.05 pounds.

Contrary to prediction by foreign experts, the alcohol produces no bad effect on the motor itself. These experts have expected that in process of combustion certain chemical compounds would result that would be detrimental to the working surface of a motor, but the Franklin engineers declare that not anything of this kind occurs. One of the troubles, they state, has been that previously all tests were made with a regular gasolene engine converted to use alcohol; the Franklin motor is specially built for the purpose of employing alcohol alone as fuel.

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SAXON LAMPS AGAIN EXTINGUISHED

Dodging Court Injunction Costs Fine of $500—Rushmore's Action Based on Charge of Unfair Competition.

Like Adolph Morris, of the Manhattan Storage Co., Herman Saxon, of New York, who does business as the Manhattan Lamp Works and also as the Saxon Lamp Co., has discovered that it does not pay to trifle with an injunction of the United States Court. To say nothing of lawyers' fees, it cost him a fine of $500 to discover the truth.

While Morris only offered lamps for sale in violation of an injunction and escaped with a fine of $100, Saxon actually made lamps of a type which the court had ordered him to desist from manufacturing. It is due to the relentless pursuit of S. W. Rushmore, of the Rushmore Dynamo Works, that both men were brought to book. It was he who obtained injunctions restraining them from in any way producing or selling imitations of his flarefront lamps, and who gave point to the injunction by making it his business to see that it was enforced. He caught Morris "with the goods on," but the Saxon case was somewhat different.

After the court had enjoined him, Saxon returned to his shop and made several minor changes in his lamp, and also affixed to it a new nameplate. Rushmore quickly detected the subterfuge and as promptly had Saxon cited for contempt of court and Judge Ray, sitting in the United States Circuit Court in New York last week found him guilty of having "knowingly and wilfully violated and disregarded" the injunction and for such contempt imposed a fine of $500, which he ordered paid to Rushmore in reimbursement for his expenses in prosecuting the contempt proceeding.

An unusual feature of Rushmore's actions is that they are based not on infringement of patents, but on a charge of unfair competition.

Engineers Exchange Views at Cleveland.

At the meeting of the mechanical branch of the Association of Licensed Automobile Manufacturers in Cleveland, on Friday last, the morning was devoted to a discussion of the address on two-cycle motors, delivered by E. W. Roberts, and of the tests recently made of a dynamometer, but the nature of the discussions was not made public. There also was considered the matter of uniform building specifications for garages with a view of increasing their safety and reducng their insurance bills. But, as usual, nothing concerning the nature of the discussions was made public. One item of interest was, however, permitted to escape from a paper read by C. E. Thompson, of the Electric Welding Products Co., on combination valves for four cycle motors; that is, valves in which nickel steel heads are welded to carbon steel stems. The escaped item stated that this company recognizes the possibility of metal being injured by high temperatures used for welding, and to overcome such injury, resort to heat-treatment after welding. In the afternoon the 18 engineers paid visits to three of the Cleveland automobile factories.

Moskovics to Produce Motor for Taxicabs.

F. E. Moskovics has interested A. F. Rockwell, president of the New Departure Mfg. Co., Bristol, Conn., and Dewitt Page, sales manager of the company, in a motor for taximeter cabs which Moskovics states will be built in the New Departure factory, even though it may be decided to form a separate company to market it. It is probable that the selling agency for the motor and parts will be placed with the Bradenburg Bros. Co., who on July 1st will relinquish the sales agency for the Thor motors and other products of the Aurora Automatic Machinery Co.

New York Taxicab Plans Big Garage.

Plans filed for the garage to be occupied by the New York Taxicab Co. contemplate a building that is to cost $200,000. It will be located on the plot at 622 to 640 West Fifty-seventh street, owned by C. E. Appleby, and will have a frontage of 225 feet, with a depth of 145 feet. One portion will be three stories high and the other will be two stories.

Foss-Hughes Takes Over an Agency.

The Foss-Hughes Motor Car Co., Philadelphia, who handle the Great Arrow car, have taken over the Noblitt & Fassett Co., who had the Pope-Hartford agency. J. H. Fassett, the head of the latter concern, was, previous to its formation, connected with the Foss-Hughes establishment.

Asks a Receivership for the Capitol.

Matilda Smith, whose claim amounts to $5,000, has applied for the appointment of a receiver for the Capitol Automobile Co., Indianapolis, Ind. She alleges that while the company is not insolvent, it is financially embarrassed. Its liabilities are $14,000, and its assets $17,000.

Dolson Plant to Start Temporarily.

The trustee of the Dolson Automobile Co., Charlotte, Mich., has been authorized to start the plant and complete some 25 cars, the parts for which are on hand; after these are finished the remaining property will be offered for sale at auction.

Hartford Suspension Moves Main Office.

The Hartford Suspension Co., which has removed its main offices to 150 Bay street, Jersey City, N. J., has, however opened a branch at 212 West Eighty-eighth street, near Broadway, New York, in charge of Ernest R. Waterman.

COURT AUTHORIZES POPE DIVIDEND

Old Chicago Claim Bobs up, but Without Effect—Lobdell's Offer for American Wood Rim Shares Accepted.

Vice-Chancellor Howell, sitting in the court at Newark, N. J., on Tuesday last granted the petition of the receivers for the Pope Mfg. Co., for authority to make a payment of 25 per cent. on approved claims, the aggregate to be paid out being $387,000. The payment, however, is to be deferred until the receivers shall have in hand $50,000 additional as proceeds of the sale of 1,465 shares of stock of the American Wood Rim Co., owned by the Pope company, which the vice-chancellor ordered to be made. The offer of $50,000 was made by E. J. Lobdell, the moving spirit in the bicycle wood rim pool, of which the American Wood Rim Co. is the foundation.

The payment of a 25 per cent. dividend was opposed by John J. Treacy, of Jersey City, on behalf of Louisa Unzicker and others, of Chicago, who put in a claim of upwards of $500,000 for breach of covenants of lease. It was averred in affidavits read by Mr. Treacy that his clients are the owners of premises which they had leased to the Pope concern for 25 years at an annual rental of $25,000, which lease still had 17 years to run when the receivers disaffirmed it. Mr. Treacy contended that should the court order the payment of $387,000 out of $402,000 available for the payment of claims, there would not remain enough to pay a proportionate share of the Unzickers' claim in the event of its allowance. The property in question was formerly the plant of the Western Wheel Works in Chicago, which the Pope Mfg. Co. acquired when it took over the remains of the "bicycle trust," which failed so ingloriously.

Mr. Treacy suggested that the lease for the unexpired term of 17 years could be regarded as an asset of the Pope company subject to such disposition as the receivers might elect to make of it.

"We don't wander so far afield to-day," the vice-chancellor smilingly answered. Mr. Treacy thereupon suggested that the proposed dividend be made only 20 per cent., thus leaving a larger sum available for the Unzicker claim, should it be allowed.

To this the vice-chancellor made rejoinder that he would like to see the money in the hands of the receivers distributed as soon as possible among the creditors who held undisputed claims, adding:

"I haven't much idea that your claim of half a million dollars will be allowed in its entirety."

Sherrerd Depue, who appeared for the receivers, urged that the full 25 per cent. be paid, saying that there could be no question but that so much of the Unzicker claim as may be allowed would also be paid.

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STANDARDIZED ROD AND YOKE ENDS

Specifications of Solid and Adjustable Types Adopted by the A. L. A. M.—Application of the Various Sizes.

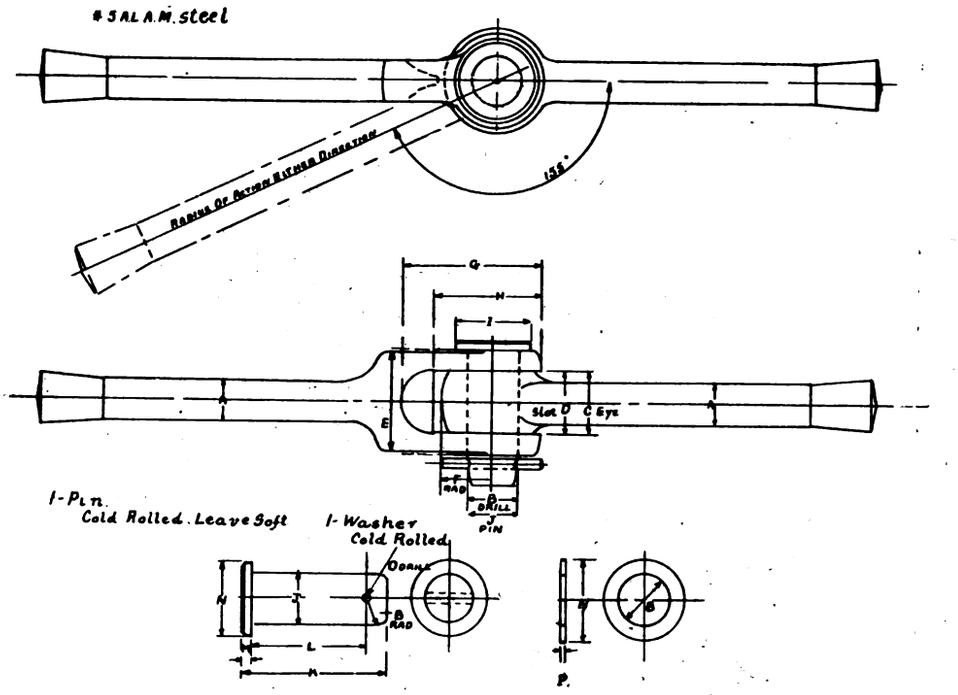
In its task of standardizing automobile construction the Mechanical Branch of the Association of Licensed Automobile Manufacturers already has accomplished a significant and by no means inconsiderable amount of work. The most recent step in the process to be completed and approved by the association was the establishment of certain standards for rod and yoke ends. Although the recommendation of the test committee was accepted last March, the official bulletin containing the specifications of the standard sizes then adopted was not issued until the latter part of last week.

The rod end fittings specified are suitable for many of the connections embodied in the control mechanism of the car, such as the brake rods, carburetter and timer connections, steering wheel hand lever connections and other light attachments. They are rated by the rod sizes, ranging from ¼ to ½ inch diameter and include five standards. In each case the dimensions are closely figured for strength and minimum weight, the "No. 5, A. L. A. M." steel being specified for the ends and rods, and cold rolled iron for the pins and washers. As only light duties are involved in the use of these parts, the joints are secured by split pins.

As shown in the accompanying drawings the designs are of two types, for solid and adjustable parts. A feature of the former is that by cutting away the throat of the clevis a very wide radius of action is obtained, amounting to no less than 155 degrees on each side of the center line. The designs being absolutely uniform, the dimensions are indicated by letters, for which the corresponding measurements, applicable to either of the five sizes, may be found in the accompanying tables.

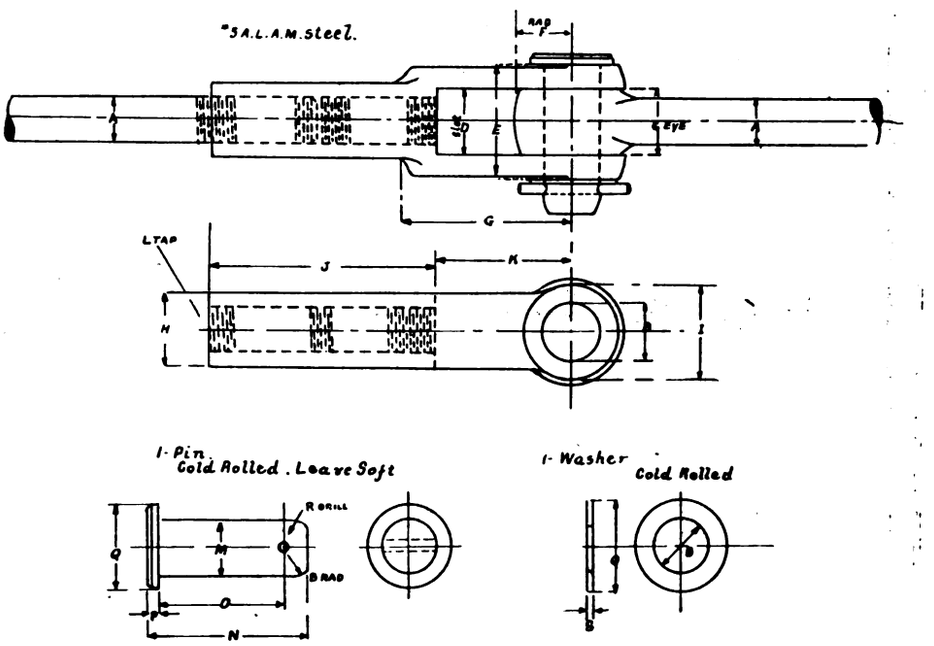
The importance of this purely detail work is readily apparent when the convenience to the maker of ordering in large quantities from the parts specialist with the assurance of absolute interchangeability, is considered, or the advantage which accrues to the latter from being able to stock such parts in large quantities for supplying a number of different makers. A further point of advantage is that no little time is saved in the draughting room by the possibility of adopting such standard fittings by sizes alone, thus saving the time and chance of error otherwise involved in designing them. Standards have now been adopted for bolts and nuts, spark plugs, and side levers, in addition to the rod ends, the results of the investigations into the questions of side levers, and also of tire sizes not having been announced by the association as yet.

A. L. A. M. STANDARD SOLID YOKE AND EYE ROD END.



A ..	¼	5-16	⅜	7-16	½	I ..	½	⅝	¾	⅞	15-16
B ..	5-16	13-32	15-32	9-16	⅝	J ..	.310	.403	.465	.559	.621
C ..	.432	.495	.588	.651	.770	K ..	1 3-32	1 ¼	1 7-16	1 ⅝	1 ¾
D ..	7-16	½	19-32	21-32	¾	L ..	53-64	61-64	1 3-32	1 17-64	1 ⅜
E ..	¾	⅞	1	1 ⅛	1 ¼	M ..	3-32	3-32	⅛	⅛	⅛
F ..	⅛	7-16	½	17-32	⅝	N* .	½	⅝	¾	⅞	15-16
G ..	1 1-32	1 7-32	1 ⅜	1 9-16	1 11-16	O ..	5-64	5-64	7-64	9-64	11-64
H ..	25-32	15-16	1 1-16	1 5-32	1 5-16	P ..	1-32	1-32	1-32	1-16	1-16

A. L. A. M. STANDARD ADJUSTABLE YOKE AND EYE ROD END.



A ..	¼	5-16	⅜	7-16	½	K ..	1	1 ⅛	1 ¼	1 ⅜	1 ½
B ..	5-16	13-32	15-32	9-16	⅝	L ..	A-28	A-24	A-24	A-20	A-20
C ..	.432	.495	.588	.651	.770	M ..	.310	.403	.465	.559	.621
D ..	7-16	½	19.32	21-32	¾	N ..	1 3-32	1 ¼	1 7-16	1 ⅝	1 ¾
E ..	¾	⅞	1	1 ⅛	1 ¼	O ..	53-64	61-64	1 3-32	1 17-64	1 ⅜
F ..	⅜	7-16	½	17-32	⅝	P ..	3-32	3-32	⅛	⅛	⅛
G ..	1 ¼	1 ⅜	1 ½	1 11-16	1 ⅞	Q* .	½	⅝	¾	⅞	15-16
H ..	½	9-16	21-32	¾	13-16	R ..	5-64	5-64	7-64	9-64	11-64
I ..	11-16	¾	⅞	15-16	1 1-16	S ..	1-32	1-32	1-32	1-16	1-16
J ..	1 ⅜	1 ⅝	1 ⅞	2 ¼	2 ½						

* For ½-in. rod, washer = 1-in., outside diameter.

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Oakland Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail light, generator, horn, tools, jack, pump and batteries. Top, $75.00 extra.
Runabout, $1,300.

Do You Realize What It Costs to Carry Dead Weight?

The man who parts with his good money for an automobile in these days is looking far beyond the first cost of the car. He wants in the first place to pay no more than a fair price for his car, but his real point of investigation is the cost of maintaining it after he has purchased.

The Oakland is made for this man.

It is designed and built for the man who runs but **one** car. It is made for the man who wants a car that is big enough to take his family out for a ride, and not too unwieldy for daily use about town when engaged in business.

It has all the power, style, and comfort which the exacting motorist is right in demanding, but the whole design and purpose of the car is to give the utmost value and the greatest service for the least possible expenditure.

How the Oakland Cuts Down Maintenance Costs

The Oakland car has been so refined in construction and design, with the number of working parts reduced to a minimum, but it **weighs from 500 to 1,000 pounds less than other two and four cylinder cars of equal horsepower.**

Aluminum is used freely throughout in its building, and it has less adjustments and working parts by over 50 per cent. than other cars of equal power and capacity.

The prompt and silent motor delivers through its straight line drive shaft full 20 horsepower to the rear axle.

The Oakland motor is a triumph of automobile designing—a two cylinder vertical motor that is perfectly balanced and free from vibration.

In appearance, performance, and cost, this is the car that most completely meets the demands of the discriminating buyer. It is an unusually good proposition for the better class of agents. Will you write to-day for further information?

OAKLAND MOTOR CAR CO., Pontiac, Mich.

SEND FOR NAME AND ADDRESS OF OUR NEAREST REPRESENTATIVE.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MAY 28, 1908

The Declaration of the A. A. A.

"Bully" is the word, employed in the sense of exultation, that best describes the feeling inspired by the stand taken by the racing board of the American Automobile Association at its meeting on Tuesday last.

In serving notice on all the world that the A. A. A. is the representative body and ruling body in America, it has done the right thing in exactly the right way; there is no mistaking the language of the notice. It leaves no excuse for further ignorance in the part of the foreign organizations which for so many years have labored under the delusion that a purely local club which had affixed "of America" to its title was representative of all America instead of merely that small part of it known as New York City. The A. A. A. notice also leaves no room for doubt as to what will happen to the men, native or foreign, who dispute its authority or offend its rules. It should effectually put an end to the pretentions of the Automobile Club of America, of New York City.

Every American with red blood in his veins must applaud the action of the A. A. A. It will serve to make its hands stronger than ever and if the foreign organizations are able to see clearly and are not willing to permit themselves to be used as cat's paws, they will lose no time in separating themselves from the misnamed Automobile Club of America and in adjusting themselves to the conditions laid down by the A. A. A. It will save a deal of turmoil and dissention, which the A. C. A. is craftily and despicably and unworthily seeking to foment. It is now merely "using" the foreign bodies to throw spitballs or spitebills of its own manufacture, and is showing that its "best wishes" uttered when—because it could not "run" the 180 other clubs comprising the association—it withdrew from the A. A. A., were as contemptibly insincere as the Motor World stated at the time. The little handful of malcontents who dominate its affairs are placing the club in a position that cannot but alienate the respect of the disinterested person anxious to respect it.

The Motor World believes in respecting international agreements, when they are properly executed, and it has small sympathy for the Vanderbilt rules which serve to encourage the "freak" car, but most of all it has no sympathy for movements for or against such agreements or rules which are not taken in good faith and which spring only from the minds of a few malcontents who are endeavoring to make mischief and who seek not to build up but to tear down and solely as a means of satisfying personal pique and spite. The plain language of the situation is that the respectable but misnamed Automobile Club of America is being made use of by a few "soreheads" and any man who can admire or respect a "sorehead," or bring himself to support a movement founded on sore-headism is possessed of a strong stomach and peculiar ideas of the right way and the wrong way of doing things.

The Regulation of Speed.

A remarkable incident passed without adequate comment recently when the first of a series of motor vehicles went into service, conspicuous above all else in that their motors are governed in such a way that the maximum speed of the machine can never exceed 20 miles an hour. Several years ago, when the governor of New Jersey was known to favor a law requiring the use of such a system of vehicle control, the very idea was laughed to scorn, and it was loudly proclaimed that it would be absolutely impracticable to use machines regulated on such a basis. It is significant of changing times, that at least one sort of service has been found in which it is deemed expedient to remove from the hands of the driver the power of excessive speeding, and engine abuse.

The adoption of this system by makers of unquestionable repute at once revives the old question of the advisability of governing the motor at all. Because of the slow response of many types of governor it has been deemed proper to do away with automatic control of the engine altogether in a good many instances. In others it has been adhered to resolutely, but always subject to accelerator control. The average driver of experience requires no sort of governor and resents the interference of one. In regard to pleasure car design, the field remains divided, therefore, with a decided leaning toward the elimination of all automatic regulation.

With the commercial car totally different conditions prevail, however. In that case, the operation of the vehicle must proceed as uniformly as possible and under certain rather close limitations as to speed. This is equally true of both passenger and goods types. Further, it is desirable to carry out the operation as automatically as possible in order to reduce the necessity of employing skilled drivers, as well as to secure uniformity of maintenance and upkeep. On this account, governor regulation of the engine appears to be as desirable as it is feasible. The innovation, as it must be deemed in this connection, is, therefore, a commendable one, and worthy of widespread notice.

Motor Cars for Municipal Use.

While the question of the cost of maintenance of automobiles owned by municipalities has received considerable attention, and provoked discussion from time to time, the subject usually has been handled in a manner likely to create the impression that the city owned motor car is an unjustifiable expense. But the subject is one to which there are two sides. In the hands of a competent chauffeur and used under the direction of a conscientious official, a motor car

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may be employed in the transaction of city business in such a way as not only to justify its use from the standpoint of expediency, but, viewed solely from an economical standpoint, its use easily may be shown as a means of saving the taxpayer's money.

Possibly the best illustration which can be made of the advantages to be derived from the automobile in connection with a city department, would be to cite the duties of an executive of the street cleaning or highway department.

Assuming, for the sake of a concrete instance, that the deputy commissioner of either of these departments is a man who will use the car, placed at his disposal, only in the city's service. The salary attached to such a position usually is about $5,000 a year. The duties of the position entail as much inspection of the streets as is possible to be made.

Before the advent of automobiles, a tour of inspection necessarily was limited by the methods of transportation then in vogue. A horse drawn vehicle, containing two men could not travel much more than 20 miles during the working day. As a tour of inspection, in a large city, easily would require a journey of a hundred miles, it could not be made without the employment of five officials entailing a salary expense of $25,000 a year for executives alone, and without considering the large additional expense of drivers, horses and incidental maintenance cost of the equipment necessary to permit of such comprehensive inspection.

With the development of the automobile this condition was altered. The hundred miles inspection was not alone made possible, but was rendered comparatively easy for one man to make. A saving of $20,000 a year at once is seen in the salary cost, while the amount invested in the car, the chauffeur's wages and the cost of maintenance will not begin to equal the sum which must be expended in the maintenance of the equipment of horses, vehicles and drivers which would be needed to make possible a daily inspection of the same amount of territory, if it had to be covered in horse-drawn vehicles.

These figures are fair, the conditions are not exaggerated, nor is the comparison an unjust one. Unfortunately it must be admitted that in some cities the motor car is used as a personal convenience by the officials to whom it is assigned. There are well known public servants whose use of the taxpayers' automobiles have made a most ill smelling scandal, which has been referred to in print and will from time to time serve as a medium for attracting most disagreeable notoriety to a species of political graft which some day must be curbed. But taken all in all, the motor car has made possible a betterment of municipal conditions without entailing an abnormal expense, and where a car is assigned to an executive who appreciates that there is placed at his disposal an instrument which adds to his efficiency, his realization of his obligation to the taxpayer will make it possible for him to use the car in such a manner that its original cost and maintenance charges will be compensated for by the amount of additional work which he can accomplish.

COMING EVENTS

May 29, Columbia, S. C.—Free Kindergarten Associations' carnival and race meet.

May 29-30, Minneapolis, Minn.—Minneapolis Automobile Club's 144 miles endurance run.

May 30, Pittsburg, Pa.—12-hours race at Brunot's Island track.

May 30, Salem, N. J.—Salem Horse Show and Athletic Association's track meet.

May 30, New Bedford, Mass.—Hill climbing contest up Smith Mills hill.

May 30, Denver, Colo.—300-miles road race for stock chassis.

May 30, Boston, Mass.—Bay State Automobile Association's race meet at Readville track.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio.—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

May 30, Rochester, N. Y.—Lake View Motorcycle Club's automobile and motorcycle race meet at Crittenden park.

May 31-June 6, Rochester, N. Y.—Rochester Automobile Club's 7-day sealed bonnet run.

June 4, Trenton, N. J.—Mercer County Automobile Trade Association's 200-miles sealed bonnet reliability run.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 6, Worcester, Mass.—Worcester Automobile Club's annual climb up Dead Horse hill.

June 9, New York City—Orphan's Day Automobile Committee of New York's annual parade of orphans.

June 13, Cleveland, Ohio—Cleveland Automobile Club's annual hill climb.

June 13, Philadelphia, Pa.—Quaker City Motor Club's race meet at Point Breeze track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrimac boulevard.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

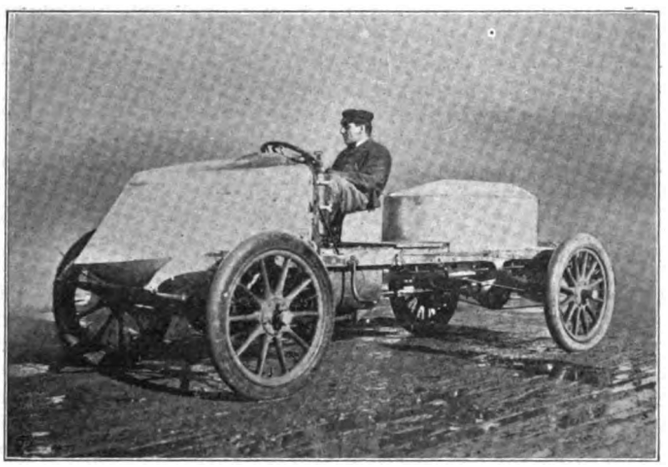
Why does not the Automobile Club of America, of New York, inspire the Automobile Club of Africa, of Timbuctoo, to write a letter protesting against the changes in the rules governing the Vanderbilt cup race? We are not certain that there is an automobile club in Timbuctoo, but if there is a club there, it is a fair guess that it will willingly sign such a letter as may be submitted by the New York club and that the letter will be just about as sincere as the protests filed by the Royal Automobile Club and the Automobile Club of France.

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WHITE'S WATERLOO A WATER KEY

Victim of the One Mishap Marring Cincinnati Hill Climb—Ladies' Race Popular and Electrics Create Surprise.

Walter C. White, the well known and popular young member of the White Co., Cleveland, and daring, but conservative driver of the steam cars of that name, met his first Waterloo in the shape of a water key at the annual hill climb of the Cincinnati Automobile Club held near that city, Saturday lost, 23d inst. As the result, White is incapacitated with a compound fracture of the right leg and several scalp wounds, which will prevent him from competing in the annual Wilkes-Barre climb next Saturday, and from all other events for several weeks to come.



WALTER C. WHITE (WHITE) WHO SUFFERED AN ACCIDENT

The accident occurred in the free-for-all. John J. Ryan was scheduled to make the first attempt, but as he was busy stripping his car, White, who was ready, was given the signal, and the racy looking steam car shot up the half-mile incline at the rate of a mile a minute. White went up the hill like a whirlwind and had just crossed the finish line in 32⅖ seconds, when he hit a water key that protruded above the street about five inches. The light car bounded in the air three or four times and came down with such force that the right rear wheel gave way, and the tire and rim bounded off and struck a boy.

The sudden swerve caused White to lose control of the machine and it headed directly toward the curb and the mass of spectators congregated there. The wall of humanity parted in time, just as the car hit the curbstone. According to reports, it turned half turtle and laid there while White was thrown out with such force that his right leg was fractured in two places and his face and scalp were badly lacerated.

The wonder is that many people were not injured, as the curb was lined with people at the time. White was not unconscious when he was lifted up and insisted on standing on both feet, despite the fractures in his leg. He also scorned to go to the hospital in the ambulance which was rushed to the scene of disaster, preferring his own touring car. The thrilling accident so worked on the nerves of the officials that after Ryan was sent up the hill and made the fastest time of the day, and another car had undertaken the stunt, they were willing that the chief of police should stop all further trials, especially as the 10,000 or 12,000 spectators so crowded around the wrecked White car that to have attempted further racing would have been to court disaster.

With the exception of this unfortunate mishap the meet was all that could have been desired. The arrangements were perfect and the course in splendid condition. The Stanley avenue hill, a half mile in length, contained just two short curves, not enough to shut off a full view of the course from start to finish.

Perhaps the race that aroused the greatest enthusiasm was the special for ladies driving. There was somewhat of an air of mystery around this race as the committee had been compelled to promise before they could secure entries, that the names of the fair competitors would be kept out of print until the day of the contest. For that reason every one in Cincinnati flocked out to the Stanley avenue hill just to get a look at women brave enough to drive a car at racing speed up hill.

The first chauffeuse to turn the trick was Miss Helen MacDonald Stallo, who, according to all reports, must be very beautiful, accomplished, lovable and everything else that makes men poetize the opposite sex. However beautiful Miss Helen McDonald Stallo is, she didn't win the prize. Miss Bessie Burkhold drove her Thomas car in considerable faster time, covering the distance in 45⅘ seconds. Mrs. Charles Bultman, Packard, was second, in 47⅖, and third prize went to Mrs. D. P. Roberts, Stoddard-Dayton, who negotiated the incline from start to finish in 58⅘ seconds. Miss Stallo was last in 1:01.

John J. Ryan took big chances and made remarkably fast performances in several events. As stated, he made the fastest time of the day in the free-for-all by driving up the hill in 31⅘ seconds, and he won the event for club members only in 34⅕ seconds. In this event, J. H. Ratliff, Thomas-Detroit, and E. A. Conkling, Stevens-Duryea, tied for second prize in 47⅕ seconds. In the class for cars costing $3,500 and upwards, which was won by Thompson, Stevens-Duryea, Ryan did not finish as well as he had expected, and he asked to be allowed a time trial to set a record. He ran up in 36⅗ seconds, which stood as a record until he later reduced this time himself.

The closest event of the meet was that for cars costing betwen $2,001 and $3,500, in which honors were scored by very few seconds. Ratliff, in the Thomas-Detroit, was timed at 46⅖, and the Queen City Auto Co.'s Knox won second place in 47⅖. The American got third in 50⅖. The Auto Motor Co.'s Ford won the honors for the little cars and C. D. Paxon's Jackson was given the ribbon in the event for cars costing between $1,000 and $2,000.

One of the biggest object lessons of the afternoon came with the running of the special event for electrics. The crowd frankly admitted that it didn't expect any of the cars to reach the summit without becoming stalled, and the incredulity manifested by derogatory remarks changed to admiration and accompanying cheers when Frank Perley, the theatrical man, steadily rolled up the grade in his Babcock in 1:34⅕. R. S. Payne, Detroit, was second in 2:24⅗. The summary:

Cars Selling at $1,000 and Under.

1	Auto Motor Car Co., Ford	1:07
2	Logan A. Thompson, Reo	1:22⅕
3	C. D. Paxon, Jackson	1:22⅘

Electric Cars, All Prices.

1	Frank Perley, Babcock	1:34⅕
2	R. S. Paynes, Detroit	2:24⅗

Cars Selling at $1,000 to $2,000.

1	C. D. Paxon, Jackson	0:57⅕
2	Surburban Auto Garage Co., Overland	0:58⅘
3	C. F. Schuberth, Klink	1:13⅕

Ladies' Race.

1	Miss Bessie Burkhold, Thomas	0:45⅘
2	Mrs. Charles Bultman, Packard	0:47⅖
3	Mrs. D. P. Roberts, Stoddard-Day.	0:58⅘
4	Miss H. McD. Stallo, Pope Toledo.	1:01

Cars Costing $2,001 to $3,500.

1	J. H. Ratliff, Thomas-Detroit	0:46⅖
2	Queen City Auto Co., Knox	0:47⅖
3	Jungclas Auto Co., American	0:50⅖

Cars Costing $3,500 and Over.

1	P. G. Thompson, Stevens-Duryea.	0:43
2	F. G. Stegeman, Stearns	0:46⅗
3	John J. Ryan, Stearns	0:54⅕
	Special time trial by Ryan	0:36⅗

For Club Members Only.

1	John J. Ryan, Stearns	0:34⅕
2	J. H. Ratliff, Thomas-Detroit	0:47⅕
3	E. A. Conkling, Stevens-Duryea.	0:47⅕

Free-for-all.

1	John J. Ryan, Stearns	0:31⅘
2	Walter C. White, White	0:32⅖
3	A. Hicklenlopper, Pope-Hartford	0:52⅘

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A. A. A. TAKES VIGOROUS ACTION

Serves Notice on the World that It Rules in America—A. C. A. Pretentions Given Deserved Rap.

If the Automobile Club of America, which, despite its title, is a purely New York organization, does not know where it "gets off" with its disgruntled pretentions to international importance, it is because the aggrieved large bearded gentleman and the small near-Napoleon who also is possessed of a "grouch," and who are making most of the club's spiteballs, are rather dull of comprehension. If the automobile governing bodies of the other nations of the world do not now realize which is the governing body in the United States of America, they will have themselves to blame for any trouble or "situations" that arise in the future.

Except in the minds of one diluted American and a few real Americans whose heads recently have required bandages, there never has been any doubt on these points, and it is only since the need for these bandages was felt that even these limited few have pinched themselves into a state of doubt. Nearly all are identified with the Automobile Club of America, and being possessed of grievances, they have sought relief by inducing certain foreign organizations to pull their chestnuts out of the fire. The alterations in the rules governing the Vanderbilt cup races afforded them an opening. First they had the Automobile Club of France—which refused the cup two years ago—write a letter protesting against the changes, and later induced the Royal Automobile Club of England—which never had an entry in any of the cup races—to do likewise. Then the Automobile Club of America intimated broadly that it would run a race in this country, not to hurt the Vanderbilt event—perish the thought!—but to respect the foreign rules, which limit entries to four cylinder cars having a maximum bore of 155 millimeters and a maximum weight of 1,110 kilograms. The new Vanderbilt rules raise these limits. Having dropped this hint, the A. C. A. began flirting with the Savannah Automobile Club with a view of running its proposed race for foreign cars on the course in Georgia.

Here matters stood until Tuesday last, 26th inst., when the racing board of the American Automobile Association held a meeting in New York. The inspired protests were then discussed, and the board did not mince matters in dealing with them. It designated plainly to the misnamed and now misused Automobile Club of America the exact point at which it "gets off," in the following resolution offered by Mr. Vanderbilt, seconded by Mr. Graves, and unanimously adopted:

Resolved, That Jefferson DeMont Thompson, the chairman of this board and of the Vanderbilt Cup Commission, be instructed to notify the corresponding boards or committees of the representative automobile associations and clubs of foreign countries that the Automobile Club of America is a local club situated in the city of New York without national functions or jurisdiction; and

That all communications concerning national or international affairs must be addressed to the American Automobile Association at its headquarters, 437 Fifth avenue, New York City, or to the chairmen of its respective boards; and

That so far as the rules of the Vanderbilt cup race for 1908 are concerned, on receiving a communication direct from any foreign association or club concerning such rules, this board will give such communication prompt and courteous consideration.

Chairman Thompson then called upon President Hotchkiss to address the board on certain matters of national and international policy, and after a full discussion, the following resolution, offered by Mr. Thompson and seconded by Mr. Vanderbilt, who stated that he cordially supported the policy of the association in preventing outlaw contests, was unanimously adopted:

Resolved, That the chairman of this board be directed to notify all foreign and American clubs and associations as well as all foreign and American manufacturers that the American Automobile Association, the national governing body in the United States, will hereafter annually sanction but three national or international events, namely, the Vanderbilt cup race for racing cars, the annual touring contest for the Glidden and other trophies, and the DeMont Thompson cup contest for stock cars; and

That in acordance with an understanding between the American Automobile Association, the National Association of Automobile Manufacturers and the American Motor Car Manufacturers' Association, as represented in a central conference committee of the three bodies, the American Automobile Association will enforce the sanctioning privileges thus committed to it by disqualifying from further contests under its sanction all manufacturers, both foreign and American, and all drivers of whatsoever nationality participating in any race or contest for which a sanction shall be refused or after notice, withheld.

That the above resolution is not intended to effect local events and those not national or international in their character, except that sanctions must be applied therefor to the American Automobile Association.

The effect of this resolution will be to limit national and international contests to the three events specified, the National Association of Automobile Manufacturers previously having recommended action of the sort. It also means that any one who competes in an unsanctioned contest of any sort, whether promoted by the Automobile Club of America or any other club or association, will be "outlawed" and will have to race in his own or the A. C. A.'s back yard.

The emptiness of the Automobile Club of America's guarded intimations that it was being supported by the Savannah Automobile Club in promoting a race for foreign cars on the Georgia course, was disclosed when a letter was read by Chairman Thompson from President Battey of the Savannah club, which stated in substance, that his club had been approached by the Secretary of the Automobile Club of America, but that the Savannah organization had done nothing with regard to such a race.

Chairman Thompson and Messrs. Vanderbilt and Pardington reiterated the statement made at the meeting of the racing board held in April, that there would be a Vanderbilt cup race this year and that prior to July 1st the course and the day of the race would be announced. Upon motion of Mr. Riker, seconded by Mr. Thomas, the chairman named F. G. Webb, Percy Owen and A. L. Riker a committee to immediately issue the entry blanks.

Those present at the meeting were William F. Hotchkiss, of Buffalo, president of the American Automobile Association; Jefferson DeMont Thompson, chairman of the racing board, and the following members of the board: William K. Vanderbilt, Jr., New York; A. R. Pardington, New York; A. L. Riker, Bridgeport, Conn.; Thomas Henderson, Cleveland, O.; Harry W. Knights, Boston, Mass.; E. R. Thomas, Buffalo, N. Y.; H. A. Bonnell, Newark, N. J.; Harry T. Clinton, New York; F. G. Webb, Brooklyn, N. Y.; R. L. Lippitt, Providence, R. I.; C. J. Swain, Philadelphia, Pa.; Percy Owen, New York; A. G. Batchelder, New York; R. Worthington, New York; Robert Graves, New York; Mayor George W. Tiedeman, Savannah, Ga.; Secretary F. H. Elliott, New York.

Mayor Tiedeman held the proxy of Frank C. Battey, president of the Savannah Automobile Club,, and Mr. Henderson, who is president of the National Association of Automobile Manufacturers, acted as proxy for Benjamin Briscoe, who on the board represents the American Motor Car Manufacturers' Association.

The meeting was much the largest ever held by the racing board. All action taken was unanimous.

Changes Made by the Formula.

It was the Brush runabout that won Class B, for cars with piston area under 50 square inches, in the Chicago Motor Club's hill climbing contest at Algonquin, Ill., May 18th, and not the Buick, as stated in last week's Motor World. The Brush finished in 1:27⅘ and won by formula, in 2.96. The Waltham-Orient was second in this class with a percentage of 3.44. The Moline won in Class C, for cars over 50 square inches, its formula percentage being 3.86. The Kiblinger won the motor buggy class in 3.33, and not the Bendix as was reported.

Janesville Club Chooses Officers.

Dr. R. W. Edden was unanimously re-elected president of the Janesville (Wis.) Automobile Club at its annual meeting, held last week. The other officers chosen were: Vice-president, E. A. Gemmerer, and secretary-treasurer, Frank H. Blodgett.

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PERFECT SCORES FOR NINETEEN

Just Half the Number Who Finished in the Cincinnati Endurance Run—Popular Enthusiasm Along the Route.

Nineteen cars finished the first 150 miles endurance run of the Indianapolis (Ind.) Automobile Trade Association on Wednesday 20th inst., without a point against them. Of the finishers there were 19 more that had been penalized.

Rains the preceding day and night had left the roads north of Indianapolis muddy and slippery, but they improved as the cars progressed. Between Indianapolis and Noblesville they were only fair but between the latter place and Anderson some of the best roads on the run were encountered, as good, almost, as the stretch between Newcastle and Knightstown.

From start to finish the run was a repetition of ovations. The country-folk generously gave up the right of way and the majority waved flags and handerchiefs and gave other evidence of their good will. In the cities the streets were lined with cheering crowds.

The run was without serious accident and excepting the few cars that punctured tires or which were forced to stop for slight repairs, none stopped except at the checking stations in Anderson and Newcastle. A few miles the other side of Newcastle it was necessary to ford a stream, the bottom of which was unusually rough, and many cars were laid up here with tire trouble.

The cars were divided into three classes according to price and the Class A perfect scorers, for cars upwards of $2,251, were three Marmons, two Nationals, two Premiers, a White, a Haynes and a Buick. In Class B. for cars from $1,500 to $2,500, only one car suffered penalization, that being the Maxwell of J. A. Newby. The perfect scorers in this class were a Maxwell, Rambler, Rapid, Lambert and Marion. The biggest list of sufferers were in Class C, for cars up to $1,500, only four of the 16 finishers getting through without counts against them. The quartet that did not have to stop for anything were Bert Corbett, Mitchell; O. Gronendyke, Maxwell; C. Brockway, Overland, and B. W. Twyman, Reo. The official summary:

Class A—Cars Listing Above $2,251.

Driver.	Car.	Time Penalization.	Examination Penalization.	Broken Seals.	Total Penalization.
W. C. Marmon	Marmon				None
H. G. Shaffer	Marmon				None
Wm. Clark	Marmon				None
Richard Wiley	Marmon	12½ minutes		1	50
J. Aiken	National	Work on brake 10 m.			25
T. Kincaid	National				None
W. F. Strobe	National			1	25
H. Moore	National				None
C. Waltman	Premier		Lost fender		2
H. Hammond	Premier				None
N. Motsinger	Premier		Foot brake light		20
W. T. Brown	Premier				None
J. W. Bell	White				None
L. Wagoner	Haynes				None
W. B. Peterson	Buick				None

Class B—Cars Listing Between $1,500 and $2,250.

M. Haywood	Maxwell				None
J. A. Newby	Maxwell	Wk. on ignition 38 m.	Hand brake light	1	121
E. Collier	Rambler				None
F. Grogan	Rapid				None
Ray Lewis	Lambert				None
T. C. Vawter	Marion				None

Class C—Cars Listing Under $1,500.

Donald Herr	Maxwell	Wk. on motor 17 m.		2	84
Bert Corbett	Mitchell				None
C. W. Kelsey	Maxwell		Bent front axle		50
O. Gronendyke	Maxwell				None
C. Brockway	Overland				None
C. Baumhofer	Overland		Gasolene tank leaked		10
W. W. Beeson	Auburn		Bad water leak		10
T. K. McCune	Richmond		One bolt lost. Hand brake light		25
R. H. Hassler	Hassler	Wk on carburetter 1 minute		1	27
B. W. Twyman	Reo				None
C. C. Himes	Cartercar	Straightening tie rod 10 minutes	Motor pounding bad, steering bent		50
W. A. Carr	Cartercar		Axle badly bent		50
G. H. Graves	Cadillac		Broken fender iron and tail lamp		12
H. Stodgell	Lambert		Rear axle bent, loose fender		52
Benefield	Buick	Wk. on motor 33 m.			66
T. M. Martindale	Leader		Water leak, lamp broken		15

UP MENARD HILL IN FAST TIME

Ransom Fleetest in Albany's Successful Climbfest—Twelve Lively Events, with Several Thousands to See Sport.

Success marked the first hill climb of the Albany (N. Y.) Automobile Club, held on Menard hill near that city on Saturday afternoon last, 23d inst. The half-mile incline was in good condition, having been oiled and scraped since the hard rains that had fallen. In consequence fast times were the rule and the twelve events were run off with a dispatch that would have done credit to veterans at this sort of thing.

Several thousand spectators were attracted by the sport and they showed an interest in the events second only to the enthusiasm of the contestants themselves. A complete telephone system and the presence of many blackboards along the course kept the spectators well informed as to the time made by the competing cars.

Silver cups were awarded in each of the twelve classes, and the long program was concluded just in time to escape a heavy shower which came up after the meet concluded. C. S. Ransom, driving a Stevens-Duryea, made the fastest time in the free-for-all for touring cars, covering the uphill course in 53½ seconds. Chauncey D. Hakes, Apperson Jack Rabbit, had the distinction of scoring the second fastest time, winning two events in identically the same time. In the free-for-all for runabouts he won easily in 57⅕ seconds, and was clocked in the same time in the event for runabouts costing more than $3,000, which he also won.

C. D. Leahy, Locomobile, scored in the class for gasolene touring cars costing more than $3,000, his time being 1:09¾. Maxwell cars took the cups in two events—for runabouts from $1,251 to $2,000, and touring cars within the same price limitations, and the Knox won the runabout class of $2,001 to $3,000. The summary:

Runabouts, $1,251 to $2,000.

1 Central Auto. Co., Maxwell..... 1:28¾
2 C. V. Yudders, Stoddard-Dayton.. 1:39
3 Schenectady Auto Exch., Aerocar. 1:54

Runabouts, $2,001 to $3,000.

1 Knox Auto Co., Knox 1:02⅗
2 James Swan, Corbin 1:02½
3 A. V. McGee, Thomas 1:08⅘
4 J. Smith Jacobs, Stoddard-Dayton. 1:12½
5 Knox Auto Co., Knox 1:12¾
6 A. J. McClure, Oldsmobile 1:14⅖
7 Fred'k Townsend, Apperson..... 1:17
8 Henry M. Sage, Oldsmobile 1:30

Touring Cars, $1,251 to $2,000.

1 W. Klingsburg, Maxwell 1:33
2 Central Auto Co., Maxwell 1:45¼

Runabouts, $851 to $1,250.

1 B. A. Burtiss, Reo 1:46¼

Touring Cars, Above $3,000.

1 E. W. Leahy, Locomobile 1:09¾
2 S. B. Taylor, Fiat 1:10

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3 Parker Corning, Lozier 1:11⅗
4 W. H. Buckley, Thomas Flyer.... 1:12⅘
5 Lucey Motor Car Co., Welch 1:19
6 H. E. Green, Pope-Toledo..... 1:20

Six Cylinder Cars.

1 C. S. Ransom, Stevens-Duryea 0:55
2 G. Y. Lansing, Stevens-Duryea .. 1:01⅗
3 Samuel Parsons, Stevens-Duryea.. 1:10
4 J. P. Randerson, Pierce-Arrow .. 1:12
5 Karl Isburgh, Stevens-Duryea 1:17¼

Runabouts Above $3,000.

1 Chauncey D. Hakes, Apperson.... 0:58⅕
2 Taylor Auto Co., Locomobile 1:05
3 Taylor Auto Co., Locomobile 1:05

Touring Cars, $851 to $1,250.

1 Sands Sons, Great Western..... 1:36
2 W. H. Aubur, Buick 2:40⅗

Runabouts Under $850.

1 C. F. Weeber, Ford 1:35⅕
2 F. B. Harrington, Ford 1:35⅖
3 F. W. Battershall, Ford 1:41⅗
4 Schenectady Auto Exch., Maxwell. 1:49

Touring Cars, $2,100 to $3,000.

1 John C. Birdseye, Thomas Forty. 1:06⅘
2 Troy Auto Exch., Pope-Hartford. 1:18⅖
3 George W. Waite, Elmore 1:45

Runabouts, Free-for-All.

1 C. D. Hakes, Apperson 0:58⅕
2 Knox Auto Co., Knox 1:01½
3 Taylor Auto Co., Locomobile 1:04
4 Taylor AutoCo., Locomobile..... 1:05
5 J. Smith Jacobs, Stoddard-Dayton. 1:10⅗
6 C. A. Warren, Stoddard-Dayton.. 1:12⅖
7 Knox Auto Co., Knox..... 1:14
8 A. S. McClure, Oldsmobile..... 1:15
9 B. A. Burtiss, Reo 2:00

Touring Cars, Free-for-All.

1 C. S. Ransom, Stevens-Duryea.... 0:53½
2 Samuel Parsons, Stevens-Duryea.. 1:09
3 J. B. Taylor, Fiat 1:09⅗
4 W. H. Buckley, Thomas Flyer.... 1:10⅖
5 Karl Isburgh, Stevens-Duryea 1:10¼
6 Parker Corning, Lozier 1:12
7 J. P. Randerson, Pierce-Arrow.... 1:20⅗
8 Lucey Motor Car Co., Welch..... 1:23

Value of Ability to Drive Backward.

Although the average motorist has small occasion to drive backward, when such occasion arises it is usually of a most urgent nature, as when the car begins to slide backward down hill, or when it is necessary to back out of a bad spot in the highway where as careful guidance is required as though the machine were being run in its normal direction. Furthermore, when the first attempt is made, it is found that backward steering is not at all easy. It requires a knack which is involved both in the fact that the wheel must be turned oppositely in order to direct the car in a given direction from what would be the case ordinarily, and also from the fact that reversed, the car becomes a front drive, rear steer affair, and consequently more or less unwieldy to handle. On this account, it is a good plan to practice backward as well as forward running. It does not hurt the car, and it is very good for the driver. The man who is able to handle his machine skillfully when backing rapidly on a straight stretch, seldom has difficulty in manoeuvreing on the garage floor, and is not liable to come to grief when occasion demands backward running on the road.

NOT ONE MADE A PERFECT SCORE

Memphis "Endurancers" Worsted by Mud Hub Deep and Bottomless Sand—Points Lost at Unexpected Turns.

For once in the history of automobiling an endurance run has been held without a perfect score resulting. This state of affairs may have happened before, but at any rate it has been so long ago that the "oldest inhabitant" is somewhat hazy about the facts. It remained for the Memphis Automobile Club to turn the trick on Friday last, 22d inst.

Just what the distance of the Tennessee club's first effort at "endurancing" was no one seems exactly to know. At any rate, the route was from Memphis across the State line to Macon, and return by way of Cordova. Penalizations were based on time allowance and mechanical replacements.

Through hub-deep mud, up steep hills, in bottomless sand and around unexpected turns the course led and of the 21 starters six never finished; indeed, it is a wonder that so many did survive. No driver went through with a perfect score, the nearest to that condition being W. R. McDonald and F. C. Stearns, with debits of 16 and 17 points, respectively. Ignorance of the course cost many points.

Jerome P. Parker, Stoddard-Dayton, was penalized 72 points for arriving half that number of minutes ahead of time at the control at Macon. Others who were penalized only for control violations and not for mechanical disarrangements were F. C. Stearns, Thomas-Detroit; F. T. Butler, Premier; E. R. Williner, White; William, Pease, Maxwell; F. M. White, Cadillac; F. C. Blomberg, Oldsmobile.

The cars that finished and their penalizations were:

W. R. McDonald, 32 horsepower Rambler, penalized 16 points; F. C. Stearns, 40 horsepower Thomas-Detroit, 17 points; E. R. Williner, 20 horsepower White steamer, 22 points; F. M. White, 25 horsepower Cadillac, 24 points; Joseph Isele, 25 horsepower Autocar, 30 points; John L. Kerr, 20 horsepower Buick, 38 points; William Pease, 24 horsepower Maxwell, 40 points; W. E. Gage, 35 horsepower Ford, 55 points; F. L. Butler, 30 horsepower Premier, 56 points; W. G. Bruce, 50 horsepower Welch, 60 points; Jerome P. Parker, 45 horsepower Stoddard-Dayton, 72 points; F. C. Blomberg, 36 horsepower Oldsmobile, 73 points; H. H. Cullen, 20 horsepower Reo, 77 points; Clarence Gibson, 10 horsepower Reo, 100 points, and T. S. Mercer, 10 horsepower Cadillac, 172 points.

Muddy Track and Slow Time at Richmond.

A muddy track and slow times did not dampen the spirits of several thousand people at the first track meet of the Richmond (Va.) Automobile Club, held on the mile track at the fair grounds on Saturday last, 23d inst. The fastest time of the day was made in the free-for-all, which went to a French chauffeur and car of the same brand sent down from New York. Even the time in this was slow for a mile track, five miles being covered in 6:59. This was fast going in Richmond; one of the local papers described the car as "dashing under the wire like a streak of blue lightning." The summaries:

Twenty miles for runabouts—Won by Dr. Lawrence T. Price; second, M. A. Batton; third, Dr. Lomax Gwathmey. Time, 30:05⅘.

Fives miles for doctors driving—Won by Dr. Lomax Gwathmey; second, Dr. F. W. Upshur; third, Dr. Stuart Michaux. Time, 7:57.

Five miles for touring cars—Won by W. B. Nelson; second, B. A. Blenner. Time, 10:10⅕.

Five miles for touring cars costing $2,000 and under—Won by Dr. H. S. McLean; second, Motor Transfer Co. Time, 8:48.

One-eighth mile slow race—Won by Louis A. Behke; second, S. Stagg; third, Dr. F. W. Upshur. Time, 1:49⅕.

Fifteen Thousand Mile Club's Mileage.

Three and one-quarter million miles or, to be exact, 3,224,353 miles, is the total distance traveled by 160 Rambler owners who have qualified for membership in the Rambler Fifteen Thousand Mile Club, the organization including only those who have driven one Rambler car 15,000 miles or over. These figures were compiled by an enthusiastic member of the club before four new members were added, which brought the total mileage close to 3,300,000 miles. Six Ramblers have exceeded 45,000 miles and the average is 20,152. These figures have been vouched for by each owner.

Some months ago when it was announced that all members were to receive sterling silver watch fobs, costing several dollars apiece, as gifts from Thomas B. Jefery & Co., nearly every Rambler dealer made a request for one of the fobs on the grounds that he had driven different Rambler models over the required distance. In such cases the request was denied on the grounds that each owner to qualify must drive one Rambler car 15,000 miles. The membership roll of this unique club closes on July 15.

Thomas Gets a Setback in Siberia.

Siberian roads are presenting more difficulties to the American Thomas and the German Protos cars—the two outfits remaining in the New York-Paris stunt—than did the worst roads in America, according to reports from that country. After leaving Vladivostok the Thomas car took the lead and held it until it got stalled in the deep mud near Nikolsk, 94 miles from the Siberian line, as they found the roads practically impassable. The Thomas car turned back to Nikolsk, and spent the night there. It started after the Germans yesterday.

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TO START WORK ON SPEEDWAY

Route Secured and Construction to Begin June 6th—Vanderbilt to Turn the First Spadeful of Earth.

Despite the fact that nothing has been said about it for some time it appears that work on the projected Long Island Motor Parkway has not been at a standstill as many persons doubtless have supposed. Right of way for the speedway has been secured from the villages of Mineola, Garden City and Hempstead, the western terminal to Lake Ronkonkoma, extending over a distance of 35 miles. Everything is in readiness to begin the actual work of construction and the first spadeful of earth will be turned on June 6th.



SURVEYORS AT WORK ON THE SPEEDWAY

Announcement to this effect was made this week by A. R. Pardington, second vice-president and general manager of the Long Island Motor Parkway, Inc. It dispels the general impression that the future of the parkway was in doubt. An enormous amount of work of an unique character has arisen in connection with the parkway, and to accomplish the ends desired it required special treatment of a quiet, effective and unobtrusive nature, which doubtless explains satisfactorily the silence that has been maintained by the promoters regarding their plans.

According to Mr. Pardington a right of way of 35 miles in length, at no place less than 100 feet in width, and in some places 200 feet wide, has been secured, and plans now are being made for a formal celebration incidental to the work of construction, to be held Saturday afternoon, June 6th. The first spadeful of earth will be turned by William K. Vanderbilt, Jr., who conceived the idea of the motor parkway and whose active support has made it possible. The ceremony will take place at what is known as the Barnes tract, near Central Park, Long Island.

The Long Island Motor Parkway, as is well known, will be a speedway restricted to motor vehicles, and will afford a speeding ground similar to none in the country, embracing all the conditions to be met with in touring and also with plenty of straightaway stretches for speed trials. It is planned eventually to hold the Vanderbilt cup and other big automobile races upon it.



ONE OF THE LONG STRAIGHT STRETCHES

E. G. Williams, chief engineer of the company, has maintained an engineering office at Mineola for the last twelve months, and his staff has been constantly at work preparing surveys, clearing side and center lines, making plans and specifications for numerous highway and railroad crossings, in order that once the clear right of was was secured the work could go on without interruption.

TO BUILD 5,000 MILES OF ROAD

New York Highway System Revolutionized by New Law—Department Created with Large Duties and Powers.

Governor Hughes, of New York, has signed a highway bill which ultimately will result in the building of 5,000 miles of good roads throughout the State.

The bill creates a State highway commission of three members, to be appointed by the Governor, to take office January 1. It will supplant the State Engineer and Surveyor in control of the State highways.

The changes are sweeping. State, district, county and town supervision are all revolutionized; the elective office of highway commissioner is abolished and succeeded by a new office to be known as that of town superintendent, that official to be elected for a term of two years; and a gigantic system of trunk highways, ramifying through all important parts of the State, is laid out, to be constructed solely at the expense of the State.

Thirty-seven trunk highways are specified. County highways will be constructed at the expense of the State, county and town, and town highways by the State and town. In all, 5,000 miles of roads will be built.

Many of the trunk highways will be hundreds of miles long. Three different roads will lead out of New York City toward Albany, and another will lead through the southern tier of cities to Buffalo. In constructing the roads the commission is empowered to abolish all grade crossings.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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TO TEST NEW JERSEY'S LAW

Johnston Has Himself Arrested, but Loses Initial Skirmish—Strong Points of Law in His Appeal.

Despite the fact that there is now pending in the New Jersey State courts a case known as the Unwin case, designed to test the right of the State to demand fees and passports from non-residents who elect to use the public highways of the State, the preliminary steps in another action of similar import, have been taken by R. H. Johnston, of the touring bureau of the White Co., who on Friday last was arrested in Trenton for driving a car which had not been licensed in New Jersey.

Johnston's arrest was prearranged. He had with him at the time his counsel, Zenephon P. Huddy, of New York. When arraigned on the charge of having "unlawfully operated his machine without having paid a license tax on same to the State of New Jersey," he pleaded not guilty, and in default of bail was held in custody. Johnston's attorney immediately applied to Judge Lanning in the United States District Court, for a writ of habeas corpus, allegally imprisoned and restrained of his liblegally imprsoned and restrained of his liberty. The hearing on the writ was held on Monday, the 25th inst., and resulted in the petition being dismissed. The Federal judge holding that as Johnston was out on $200 bail, he was not being unduly restrained of his liberty and therefore there was nothing to justify the court taking jurisdiction.

In bringing the habeas corpus proceedings before Judge Lanning, Mr. Huddy intentionally had selected a judge who very recently had given a decision in a case in which this same question of Inter-State commerce had been involved. Simpson-Crawford & Co., of New York, had appealed from the imposition of a license tax of $10 imposed by an ordinance of Atlantic Highlands, N. J. The company set forth the claim that the tax was imposed in violation of the inter-state commerce law, this claim Judge Lanning sustained, and declared that while the ordinance had been enacted under statutory authority, it was unconstitutional and void as against Simpson-Crawford & Co., located in New York City, in the State of New York.

When seen by a Motor World representative, Mr. Huddy explained that Judge Lanning did not wish to go into the details of the Johnston case, as a decision from him would take the matter away from the jurisdiction of the State courts. The judge therefore dismissed the writ of habeas corpus on the technical ground that the petitioner was not actually incarcerated, and therefore was not restrained of his personal liberty.

"How soon do you expect a decision which will affect motorists?" Mr. Huddy was asked.

"I think you safely may assert that within three months the Court of Common Pleas will decide that a tax for purposes of revenue cannot be assessed on automobilsts. The effect of such a decision will be to permit automobilists, registered in their home States, to use the highways of New Jersey. Such a decision will be in effect until it is revoked in a higher court. It will not be possible for the State to secure a stay pending an appeal.

"This is the first case of the kind that has been brought. The well known Unwin case involved merely the question of the right of the State to tax one class of vehicles and exempt another class."

"Will the decision on a question involving inter-state commerce law serve as a ruling affecting the rights of all automobilists?" asked the interviewer.

"Yes. If Johnston's arrest was illegal, any automobilist may enter the State without paying the fees imposed by the Frelinghuysen bill."

The hearing in the police court will take place on Friday, the 29th inst. No matter what decision is given in this court an appeal immediately will be taken to the Court of Common Pleas, and the decision then handed down will be the first decision that will have real weight.

To all intents and purposes the action in the police court merely is formal. Such a proceedings must be gone through before the case can be carried to a higher court. Whatever the decision, it will be appealed.

In his petition praying the Federal judge for the issuance of the writ of habeas corpus Johnston alleges as follows:

That your petitioner, at the time he was arrested as aforesaid, was engaged in carrying on inter-state commerce between the State of New York, New Jersey and Pennsylvania, with a motor vehicle driven on the public highways. Also for the purpose of pleasure.

That the said motor vehicle had in every respect complied with the Motor Vehicle Law of the State of New York.

Your petitioner did not possess, and had not purchased the license required by the law of the State of New Jersey, but the said motor vehicle did carry the New York State tags.

That his said arrest, imprisonment and detention are for his failure to procure the said New Jersey license and pay the said revenue tax for the same, said tax being $10, and for the purpose of revenue.

1. That the unconstitutionality of said revenue tax is clear.

2. That your petitioner is deprived of his right to enter the State of New Jersey with a motor vehicle for the purpose of engaging in inter-state commerce.

3. That he will be arrested and prosecuted every time in the future he so enters the State of New Jersey.

4. That to litigate the constitutionality of the said tax in the State courts will necessitate great delay and expense.

5. That in order to secure his rights he will be compelled to litigate said question every time he enters the said State of New Jersey, with a motor vehicle, engaged in inter-state commerce, if he is arrested and prosecuted for so doing.

6. That to litigate the constitutionality of the said tax every time he is arrested and prosecuted, as aforesaid, will put your petitioner to great inconvenience, delay, and expense out of all proportion to the expense of paying a fine or fines imposed under the State law.

7. That the question which will be raised by the issuing of said writ is one which is of great public interest and importance, both to citizens of the State of New Jersey and the citizens of other States of the United States.

8. That by reason of said unconstitutional tax, the citizens of several States are denied the privilege of using automobiles on the highways of the State of New Jersey in pursuit of inter-state commerce, which privilege with reference to other States the citizens of the State of New Jersey enjoy.

Wherefore, your petitioner prays that a writ of habeas corpus issue to require into the legality of his said imprisonment and detention.

Buffalo Local Tax Declared Illegal.

By a decision handed down by the Court of Appeals at Albany last week, automobile owners of Buffalo will not be required to pay the $5 tax imposed by an ordinance passed by the Common Council. The court decides that the ordinance is unconstitutional and the decision is one of the greatest importance, as conditions similar to those in Buffalo exist in many other cities.

The legal fight was waged between the Automobile Club of Buffalo, through Dai H. Lewis, one of its members, and the City of Buffalo. Judge Daniel J. Kenefick conducted the proceedings for Lewis, and Assistant City Attorney William S. Rand appeared for the city.

The case has attracted considerable attention from motorists throughout the country. The New York State motor vehicle law provides for a fee to be paid by each person owning or operating a motor vehicle and it provides also that when this fee is paid no municipality shall pass any by-laws or ordinances that shall interfere or conflict in any way with the State act. In spite of this the Buffalo Common Council passed an ordinance by which automobilists were to be subjected to an additional local tax of $5 per year for the privilege of operating an automobile on the streets.

Dai H. Lewis refused to pay this tax and offered himself as a subject for a test case, at the suggestion of the Automobile Club of Buffalo. The case was first heard before Judge Hodson in the Buffalo Municipal court and he held that the ordinance was invalid because it intervened with the provisions of the State motor vehicle law. The case then went to the Rochester Appellate Division, which sustained the finding of Judge Hodson. After this the City of Buffalo took an appeal with the above result.

After the ordinance was passed several hundred dollars were paid by automobilists rather than have any trouble. Those who paid the $5 tax may now recover their money, thanks to the persistency of Dai L. Lewis and the Automobile Club of Buffalo.

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SINGLE PEDAL FOR CAR CONTROL

Radical Adaptation of Friction Planetary Drive Principle—Clutch, Gear Box and Gear Levers Eliminated.

However satisfactorily the design of the motor car may have progressed up to this time in other respects, engineers are still endeavoring to produce a transmission mechanism embodying the features recognized as desirable in the present types to which shall be added a number of improvements of one sort or another, and above all else, that most desirable feature, an infinitely veriable speed ratio. In friction gearing, several systems of which are in current use, appears to be the only feasible solution of this particular part of the problem. Yet the ordinary friction gear possesses a number of drawbacks which mitigate against it greatly. What may be termed one of the most radical methods of construction yet proposed, however, is an embodiment of this principle recently designed by L. M. Dietrich, a Kansas City (Mo.) engineer, who previously was connected with several concerns in the East, which offers an interesting study in design.

Because of the extremely radical nature of the invention involved, as well as because of its revolutionary and sweeping import, the originator of the system in question has presented his idea in the form of a couple of brochures in which its theory is fully explained and exemplified. In "The Evolution of the Automobile," the problem is expounded in its entirety, while the solution is given at length in "Theory and Practice of the Dietrich Universal Drive Axle," the second of the two pamphlets. For the purposes of a brief review of the construction and operation of the Dietrich axle, it is sufficient to cover only the salient points of the study. For those who are willing to devote more time to the question, however, a perusal of the complete and vary suggestive essay is to be recommended, as in addition to revealing the advantages claimed for the "remedy," it is very successful in calling attention to the weak points in the ordinary systems of transmission which it is desired to correct.

The automobile has just now come to the third stage of its development, according to Mr. Dietrich, which is to say, that in which a practical working model has been improved upon by successive degrees, with consequent success from the standpoint of operation, but at the expense of complication. The first two stages he cites are, respectively, those of the original concept of the basic idea, and its evolution into tangible shape. The fourth stage, that of reduction and simplification into standard forms is now due, he thinks.

The remedial system which is to accomplish at a single sweep the entire reformation of automobile construction as at present understood is based upon two fundamental ideas, "the one a mechanical principle and the other, the discovery of so far unused properties of a well known material," according to the inventor. Its novelty, however, consists in the adaptation of ideas already used in other connections, as he explains, and not in absolute departures from precedent.

A glance at the inventor's own characterization of the device is sufficient to reveal its ambitious nature and show how near it comes, in theory, to the long-sought ideal of motor vehicle transmission, since it permits the use of a constant speed motor, and a control system absolutely elemental in its nature, consisting of the steering wheel and two foot pedals.

"In the rear axle housing of normal diameter, but greater length," he says, "is enclosed a mechanism, consisting of two spur gears, two bevel gears, and four discs, which allows, by the operation of a single lever, actuated by a foot pedal, of a gradual, positive change of speed of the vehicle, from standstill to full speed, ahead or reverse. Another lever, connected with the steering mechanism, imparts to each of the rear wheels the proportionate, necessary number of revolutions when turning a corner. An over-running of the car over the speed, set by the foot lever is impossible, thereby giving absolute speed control by one pedal. If such pedal is set for the highest car speed desired, the rear axle mechanism will automatically reduce or increase the same, between this given speed and standstill, according to grade, road conditions and varying load, but such highest limit may be changed at any moment, while running, by simply operating the speed pedal."

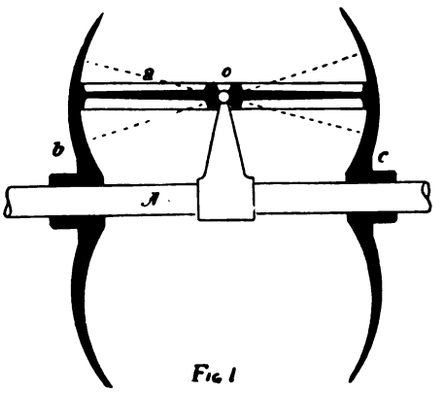


Fig 1

The "mechanical principle" mentioned, proves to be an application of the planetary system, but a totally novel one in this connection, while the "unused properties of a well known material," are the durability and elasticity of cork, which is claimed to be of special value as applied in this connection. In explanation of this seemingly unwarranted claim, it should be stated that by the elasticity of the cork friction surface employed in the planetary friction members, the evils due to "cross slip" so common in ordinary friction gearings, are eliminated.

In the common double disc friction, for instance, the driving contact while theoretically a line contact, actually is a surface contact. Thus, while a knife-edge disc would drive another without surface slip, a disc of appreciable thickness must develop a slight amount of slip at either side of the contacting area, while the center of the disc travels at the same speed as the driven member. This differential action between the two sides of a driving disc is not to be confused with the angular slip due to improper contact, and noticeable in a loss of the proper number of revolutions transmitted through the mechanism. Cork, as is claimed, manifests sufficient elasticity to enable it to respond to this requirement, affording actually a "surface contact and not a line contact, and a surface drive without internal slippage, instead of a point drive, ... the whole surface transmitting power."

The mechanical principle involved is demonstrated in the accompanying Fig. 1, in which it is evident that two principal elements or concave discs are employed, between which an idle pinion is mounted on a short crank arm which is made fast to the axle. The two concave discs are driven at equal speeds in opposite directions, thereby causing the idler to rotate. So long as the idler remains parallel to the axle, the arm upon which it is mounted remains at rest. But as soon as its angular position is changed with relation to the axle, the opposite sides of the idler are forced to travel at different rates of speed, since they contact on different radii of the two driving discs. The effect thus secured is that of the ordinary planetary system, as will be seen if the idler be imagined as turned into a position at right angles to the axle.

In Fig. 1, b and c are the two driving discs and a is the idler, which is so mounted on its axis, o, that it may be oscillated by suitable linkage. Whenever a is parallel to the axle, A, the arm on which it is mounted will remain stationary. But when it is changed to an angular position, its arm will be made to revolve, since one side is in contact with a larger circle than the other, although both circles have the same angular speed.

Without entering into the details of the application of this idea, which develop several rather startling and fortunate properties, two of the three adaptations illustrated by the inventor may be described. That shown in Fig. 2, is merely a mechanical form of the ideal given in Fig. 1. Within a globular housing on the undivided rear axle are mounterd four discs. The first which is keyed to the propeller shaft of the car, is in the form of a bevel gear, which meshes with two others, loosely mounted on the axle and having the characteristic circular depressions or concave surfaces which are necessary to the system. The fourth member of the group is the floating fric-

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tion idler, carried in ball bearings on an arm keyed to the axle. The latter is also so contrived that by means of an external yoke and collar, a rod lying within the axle may be actuated to rock it into or out of parallelism with the axle.

When the idler or floating disc, as the inventor prefers to call it, is in the position shown in the illustration, the motion of the bevel group while causing it to rotate, has no effect on the axle. When it is thrown into any other position, however, it begins to travel around, dragging its arm and so the axle with it. The direction of the angle, of course, determines the direction of axle motion, while the amount of angularity determines the rate of revolution of the axle. This arrangement is held to be useful for machines driving through a solid axle with differential clutches at the ends, for those driving one wheel only, or those using a differential mounted between the floating disc and the axle, which in this case must be divided.

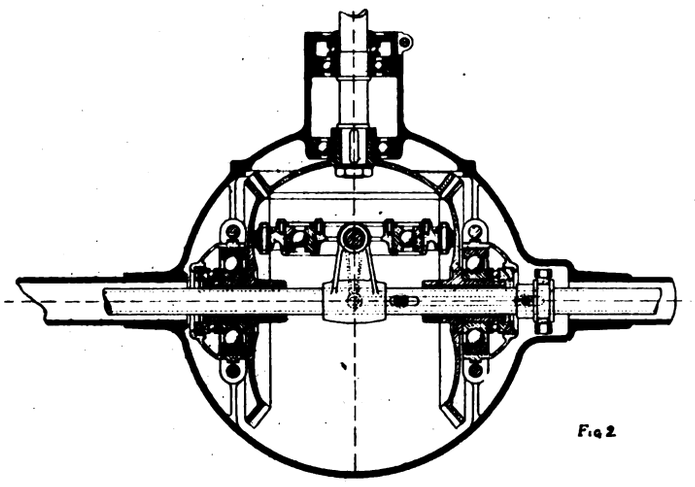


Fig 2

The arrangement shown in Fig. 3, combines the principles of the regular and silent types, one side showing intermediate bevel gears, which, on the other side, are replaced for purposes of illustration with friction bevels. In this arrangement, which is intended for use in a heavy vehicle, the automatic principle referred to in the claims quoted above, is brought to the front.

The driving effort from the motor is carried through the propeller shaft to a spider shown in the upper part of the illustration, and connected by a set of six tension springs with a second spider mounted on a short driving shaft on the same axial line. As the drive is carried through the springs the relative position of the two spiders is altered in accordance with variations in the driving torque. This effect is employed in automatically governing the speed of the vehicle.

The second shaft mentioned carries a bevel gear or bevel friction disc which engages a similar bevel on a drum of peculiar shape which is mounted loosely on the axle shafts. The driving group employed is similar to that shown in the previous arrangement, but in duplicate, each independent set serving to drive one end of the divided axle. The drum in question provides a circular path for each of these drives, the other member of each group being driven through an independent idler, shown in oblique position at either side of the illustration. The floating discs are mounted on arms keyed to the axle ends, and are oscillated to alter the driving relation by independent yokes and links, shown in light lines outside the axle housing. In the position shown, the discs are neutral so far as the driving relation is concerned, the two main friction members of each group being driven at different speeds in order to bring this about.

The linkage used in actuating the drive employs a balance beam, to either extremity of which is connected the link actuating one of the floating discs. Near the extremities of the beam two rods are attached, which lead to the steering gear of the car. The method of connection is such that whenever the front wheels are deflected, the floating discs are inclined with respect to the axle in such a way as to effect the proper differentiation of the driving wheels. The ordinary automatic differential is thus dispensed with, a perfect and accurate control of the differential function being secured in its place.

In order to regulate the speed of the vehicle, a rod is taken from the center of the balance beam to the control, pedal within reach of the driver. Moving this pedal, thus serves to apply both driving groups simultaneously, but always subject to the compensating action of the steering gear. By simply moving this pedal in the proper way any desired speed ratio between the motor and the driving axle may be obtained. The automatic feature which is involved in this connection, however, is of the greatest importance.

The connection to the control pedal is not rigid, but takes effect through a spring. This, being in tension, tends to compel the linkage to follow the pedal, but permits it to vary under certain circumstances. Returning to the connection of the propeller shaft, it will be observed that the housing at that point includes a band brake and also a lever arm not before mentioned. The arm in question is carried by the driving spider on the end of the propeller shaft, and bears against a cam surface formed on the spider which the first member drives through the set of tension springs described above. This lever is directly connected with the balance beam which serves to regulate the speed of the vehicle.

In consequence of this arrangement, when the driving resistance becomes too great for the motor at the speed determined by the position of the controlling pedal, the driving springs between the two spiders are elongated, causing a slight relative motion between the two spiders. This causes the cam surface to move the short lever in the housing, and so, "steps down" the speed ratio, as it were, the reduced gear thus giving the motor its required advantage. When the car tends to overrun the motor, the reverse action takes place, and the brake is applied, thus checking the speed of the vehicle automatically.

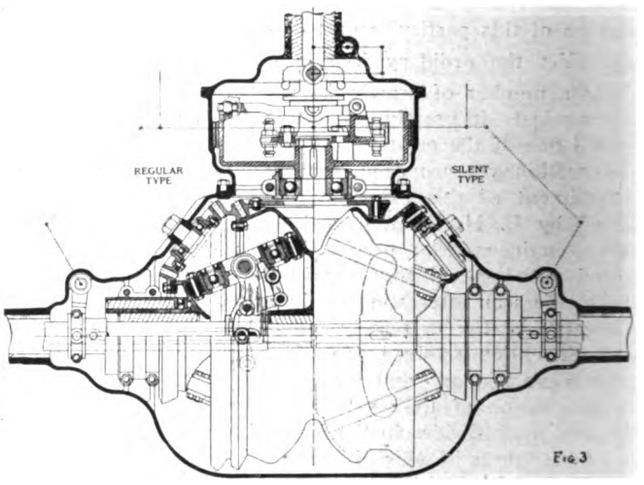


Fig 3

The result is a perfectly automatic control of the vehicle at any speed as determined by the position of the controlling pedal, with differential action governed by the mechanism, and therefore correct at all times and not liable to the involuntary action which so frequently develops skidding, and also a unit, axle-mounted change speed device, making with the motor, a two-unit power plant, without master clutch, gear-changing levers, or any of the familiar mechanism.

The system covered by these two and the third arrangement are announced as "suggestions" to be developed for the individual purpose of the builder. The points involved are subject to prospective patents in ten different countries, and are held by the Helma Securities Co., a Kansas City corporation.

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IMPROVED TYPE OF AMBULANCE

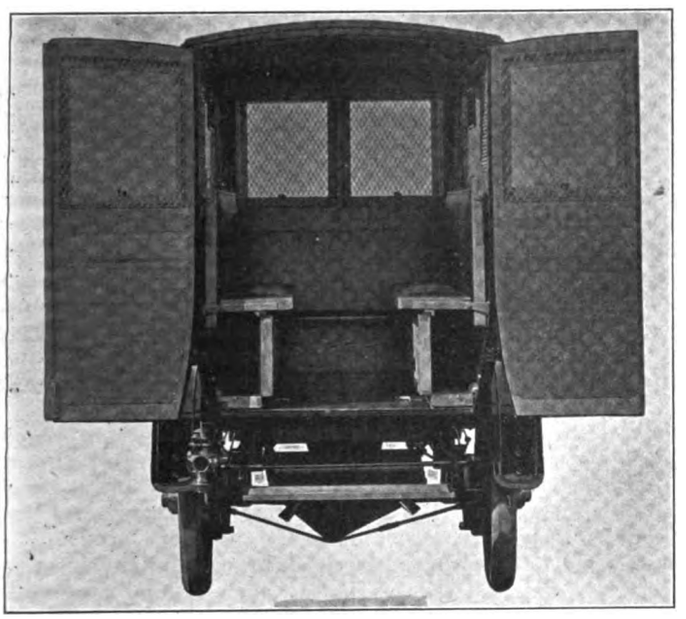
Provision for Ease in Studebaker Model for New York City Service—Better Protection Against Exposure.

While the city of New York owns a large number of automobiles, its cars are nearly all of the touring or runabout type. Until recently, comparatively little was done in the matter of securing automobiles adapted to the requirements of the ambulance or police patrol service. Within the past year, however, considerable interest has been taken in the subject of motor cars for these purposes with the result that two automobile patrol wagons are now in the possession of the police department and a gasolene automobile ambulance has been purchased for the department of public charities.

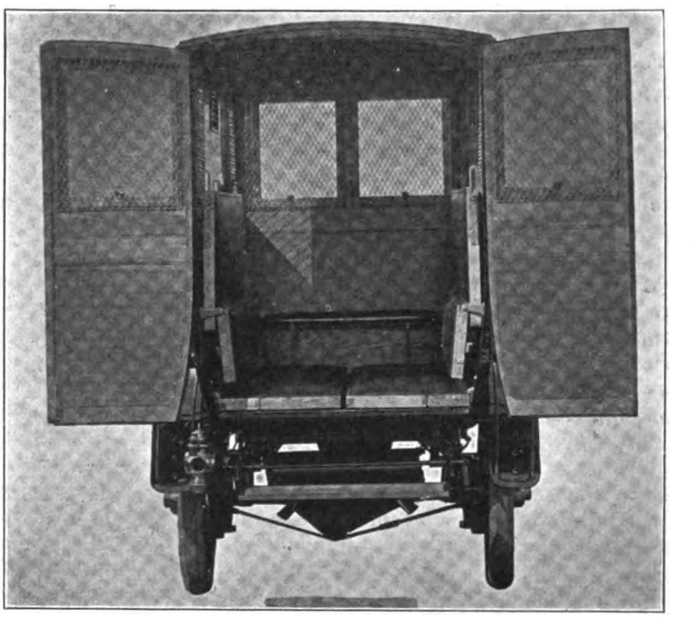
The new ambulance was built by the Studebaker Company and assigned to duty at the Kings county hospital. The body is of the type usually used on ambulances but incorporates a side entrance of the car as well as the usual rear enertance. The upper half of the side entrance doors are of glass, and the rear doors reach from the floor to the roof, which is a vast improvement on the usual type of ambulance body, where the back generally consists of a tail board and storm curtain, which affords but little protection to the patient and surgeon on stormy days.

The accompanying illustrations show the interior of the ambulance. To one who is familiar with the body construction as usually applied to horse drawn vehicles used for this purpose, the contrast between the old style body and the one used on the new Studebaker ambulance is very marked. In the new type, the patient may be carried on a cushioned berth instead of on a stretcher as in the old type.

The interior of the body has four collapsible berths, which may be folded up and put out of the way when their use is not required. The chassis is rated at 30-35 horsepower. The wheel base is 136 inches.



BERTHS UP READY FOR USE



BERTHS FOLDED OUT OF THE WAY

Lubrication of Small Parts Essential.

"The commonest error on the part of many motorists is in neglecting lubrication of small parts." says H. E. Coffin, vice-president of the E. R. Thomas-Detroit Co. Most of them will make sure that the motor is given its regular quota of oil and that the transmission and rear axle are properly filled, but the lubrication of such things as fan, front wheel, steering connections, spring link, and various lever bearings is entirely lost sight of. Manufacturers place attractive brass oil and grease cups at all important points of the car where it is practicable to do so, in the hope that they will be noticed and used, but in too many instances the result is not attained. Not only is lubrication neglected, but a cheap oil is used merely to save a few cents per gallon. This failing often results in repairs of a very expensive nature."

Modified Lighting for Town Cars.

For machines which are to be used about the city exclusively, whether of the town car type, or merely adapted to that purpose, it has been suggested that a modified lighting system be employed. The ordinary acetylene headlight being too brilliant for city use, and the common dash lamp affording hardly sufficient illumination, it would appear that either to use very large oil lamps, or small acetylene lamps designed with a relatively short focus would be of advantage.

EXCESS OF OIL IN CRANK CASE

Troubles that may Arise from Over-Lubrication—Simple Method for Regulating the Amount Supplied.

One of the most annoying troubles with which motorists have to contend is misfiring. Usually the cause of the annoyance may be traced to some part of the ignition device, but frequently the time lost in examining the wiring, testing the batteries or looking to the magneto could be saved and the cause of the trouble at once located if some means were at hand for determining the amount of oil in the crank case. Too much oil means fouled plugs, and fouled plugs invariably cause misfiring.

The simplest way of preventing the accumulation of too much lubrication in the crank case, is first, to ascertain just how much oil may be contained there, then solder a tube on the drain cock, the top of the tube being even with the highest level of the oil. When supplying the case, leave the cock open and inject oil until it flows through the cock, then close it and the amount of oil will be sufficient for all lubricating purposes, but will not be enough to foul the plugs. The same test will disclose when the oil supply is too low. If it will not flow through the opened cock, add more oil until it does drip out. To entirely clean out the case it merely is necessary to unscrew the drain cocks.

In soldering the tube to the cock, care must be taken to have a permanent and thorough connection made. While the possibility of the addition becoming loose, is remote, the damage which might result from such a course, sometimes would be considerable.

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STOCK ROOM FOR THE PAINT SHOP

One of the Much Needed Conveniences—How It Should be Arranged, Eqiupped and Cared for.

"The average automobile paint shop stock room is far from being what it should be or from what it is likely to be in the near future," remarks an expert in finishing matters, and one whose experience dates well back into the carriage trade. "The trade is fast finding itself, and from the ill-adapted and, for the most part, unsuited paint shop, with an equipment hastily collected, the painter may be expected to find himself in quarters more in keeping with the importance of his business.

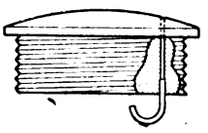
"This may be said of both the factory and jobbing shop painter, the last named having thus far fared the worse in respect to working quarters and conveniences. And in connection with the primitive shop, there has been a no less primitive arrangement, generally speaking, for the storing and care-taking of paints and varnishes and other supplies. Logically, as a consequence, there has been a good deal of waste in the housing and handling of materials in and about the automobile paint shop. The repainting of automobiles as a business depends, in a large part, for its success upon the economy practiced in the buying and care taking of the materials. To be sure, with the improvement in paint shops there must naturally be improvement in the stock room and in the methods of handling stock. . . . .

"It is not too much to claim that all automobile paint shops should be provided with a stock room in which may be found shelf room for the proper storage of paints and colors, varnishes, etc. Here, too, should be the paint bench, the necessary paint mill, dust-tight compartments for the brushes, for sponges, for chamois skins and for those hundred and one other items of stock and tools which belong with the right furnishing of the apartment. In this stock room, against the wall, should be placed a board of a size large enough to wipe the paint brushes upon. A neat device for concealing this wiping board, when not in use, consists of a box-like cover hung by hinges on the wall at a point to exactly swing over and cover the wiping board completely with zinc, or, if easier to obtain, sheet iron. This is excellent to work upon and it is easy to keep clean.

"This stock room, above everything else, should be kept clean. Dust and dirt must not be allowed to accumulate anywhere in it. Paints and colors should be so kept and looked after that all waste is reduced to the minimum. Here, during cold weather, the heat should be moderate and, quite as essential, uniform. The opened cans of varnish, japan, turpentine, oils, etc., or those, rather, from which the contents are being drawn from time to time as needed, should be kept clean and devoid of congealed drippings. As a matter of fact, the stock room should be the quarter where stock is conserved, not wasted, and where every opportunity is taken advantage of to get the best possible results from the capital invested. This is business like; indeed, it is business."

Gasolene "Check" Valve for the Air Vent.

While it is essential that there should be an air vent in all gasolene tanks, the construction of the vent should be of such a character that the contents of the tank will not spurt out through it. It practically is



the universal custom to arrange for air passage through the cap of the gasolene tank. Some caps are constructed with a check valve arrangement which freely admits the air, but prevents the gasolene from slopping out. Where no such provision is made by the manufacturers, the owners of automobiles may construct for themselves a simple device which will prove highly efficient.

As shown in the illustration, the home made "check" consists only of a short piece of very small tubing, bent in the form of the letter J. Redrill the air hole in the filler cap so that the tubing can be sweated in it, and when this latter operation is finished, the "check" will be found to be an improvement well calculated to give complete satisfaction.

Benefit of Declutching at Sharp Corners.

While it is a wise plan to declutch when rounding a sharp corner, merely as a precautionary measure to prevent dangerous skidding, it also has a beneficial effect on the tires. Whenever the car tends to skid, due to its deflection from a straight course, a cross strain is brought to bear on the tire treads which is directly proportional to its weight and the radius of the curve and proportional to the square of its velocity. If the power is applied while rounding the curve, the tendency to rip off the tires is further aggravated by the backward drag due to traction. If the clutch is released, however, that factor is removed, and the strain thereby is reduced to its minimum amount.

Magneto Requires Special Spark Plugs.

It is taking some time for users of magnetos to discover that the ordinary spark plug will not give the best results. The strong spark generated by the magneto necessitates more insulation and much stronger sparking points. The magneto spark plug is not an imaginative product as some men appear to fancy.

EQUALIZES LOAD ON BOTH SIDES

Supplementary Suspension Combining Helical and Elliptical Springs—How One Spring Supports End of Machine.

Considering the extent to which they have been applied to the suspension of railway vehicles, it is rather to be wondered at that automobile designers have paid so little attention to the use of helical springs hitherto. It is true that in connection with supplementary suspensions they have been applied with considerable success. But with one or two exceptions the vehicle designer has let them severely alone. An exception to this rule appears in the case of a suspension recently devised by an Italian engineer in which is employed not simply a combination of coil and laminated springs, but further, a means of equalizing the load on opposite sides of the vehicle.

Primarily, the chassis is mounted on an ordinary semi-elliptical spring system, which, in the rear, takes the form of the familiar three-quarter platform. Instead of being perched directly on the axle, however, the side springs are hung on a secondary linkage which obtains its support from a large helical spring stretched across the vehicle parallel to the axle and connecting the two side suspensions. The linkage involved is merely a parallelogram two points of which are fixed with the axle, the other two being rigid with the spring perches. The result is that the chassis and spring mounting is free to move vertically, but is constrained to preserve its alignment, and is braced against cross strains. By means of an arm extending toward the center of the vehicle from each of the parallelograms, the two sets are floated on the helical spring.

As a matter of course, the system is complicated beyond that of the ordinary arrangement by just the amount of mechanism involved in the supplementary suspension just described. This may prove to be justifiable, however, in case the hopes of Luigi Granieri, the inventor are fully realized. These, in a word, comprehend the ultimate elimination of the pneumatic tire. In this connection it is claimed that the experimental machine on which the system has been tried was driven successfully over the road at the rate of 60 kilometers an hour without causing inconvenience to the passengers.

Protection of Tire Casings.

It pays to go over all tire casings frequently, picking out any bits of grovel or metal which may have become embedded in the surface. The small cuts which they leave should be sealed at once with good strong cement. This precaution ensures the detection of any tendency to peeling or blistering of the rubber.

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ADVOCATES SHORT STROKE MOTOR

British Designer Claims Eleven Points in Its Favor—Considerations of Efficiency, Weight and Cost.

So long as his engine will run, the average motorist is not apt to be much interested in such questions as the relation of bore to stroke, or as to the theoretical considerations involved in such matters as relate solely to design. If his motor fails to run as it should or proves not to have sufficient power for its work, he looks about him for another which seems to be more suitable. He seldom inquires for any other particulars than those relating to nominal power, bore and stroke, and weight. At the same time the relation is one of vital importance and further, one which remains to be settled, since no absolute agreement has been reached by the makers, even as to the proper relation for any one type of motor, that is to say, high speed of rotation, high power; touring or town car service.

In general it is understood that a long stroke conduces to efficient performance, while a short stroke tends to develop a lively, free running motor, less economical in operation, but more desirable in a number of other respects. On this account, most of the automobile motors in present day use are to be regarded as compromises in respect to fuel economy and general running efficiency, if such a term may be employed. The advantage derived from the use of the long stroke is due to the fact that it affords a greater ratio of expansion than the short, thus ensuring a greater percentage of work from each charge exploded. The short stroke motor has a higher mean effective pressure, on the other hand, and usually fires a cleaner charge.

In this connection the opinion of a well-known English designer, C. Ricci, in which he favors the short stroke motor, for reasons duly set forth, is of interest, as showing why it is sometimes desirable to sacrifice fuel efficiency for "running efficency." Some four years ago, when he had occason to design two six-cylinder motors for one of the largest motor car firms in Great Britain, he had considerable difficulty in convincing his co-workers of the wisdom of his theories. The two motors, one of 4 by 4 inches, and the other of 4 by 5 inches dimensions, instead of the then more conventional 4 by 5 and 4 by 6, would be useless, it was contended. Furthermore, "they would not climb hills."

As showing how far wrong these ideas were, he states that the 4 by 4 engine "gave 50 per cent. more power than the engines of the same bore—made by this firm—had given up to that time. "In fact," as he announces with evident pride, "both sizes have been manufactured during these four years without any modification whatever, and they are still considered the best engines on the English market.

"The reasons which I advocated four years ago in favor of a short stroke motor, are exactly the same as those affecting the conditions of the petrol engine of the present day," he continues. "In fact, if we consider two motors, A and B, both of the same bore and design (say 4 inches), and constructed to work at the same speed, but A with a stroke of 6 inches, while B has only a stroke of 4 inches, we will find:

"1st. That the long stroke engine, A, would require its connecting rods 50 per cent. longer (for the same angularity) than engine B, and, naturally, they would be considerably heavier.

"2d. That its cylinders will be longer and heavier, and more expensive than those of engine B.

"3d. That the crank chamber will also be larger and bulkier and more costly than that of engine B.

"4th That the crank shaft, owing to an increase in torque of 50 per cent., will have to be given a larger diameter, which, added to a longer throw of 50 per cent., will make it much heavier and more costly than that of engine B.

"5th. That the diameter of the fly wheel will have to be nearly 50 per cent. larger for engine A if we keep to the same weight, or more than twice as heavy if we keep to the same diameter, and naturally more expensive.

"6th. That the size of the clutch driving shafts and transmission gear have to be much larger, heavier, and more expensive for a motor car with an engine of the type A than one with the type B.

"7th. That the starting of a motor with a short stroke is much easier, and just in the same proportion of the stroke than the one with a long stroke.

"8th. That the efficiency of a short stroke motor (where the length of connecting rods is the same) is by far better than that of a long stroke one, owing to the reduced thrust of the pistons on the sides of the cylinders, or by what is commonly called less angularity.

9th. That the vibration and shock in transmission of power are considerably reduced in motor B, owing to the smaller oscillations of the conecting rods, and also to the smaller torque of 50 per cent.

10th. That with a long stroke motor, all the parts of the engine, gear, etc., having to be stronger and bulkier, the whole car will consequently be considerably heavier and not able to run at the same speed developed by a lighter car, nor go up the hill as easy.

"11th. That, obviously, a car constructed with a short stroke engine, will be lighter, cheaper to make, and easier to start; less noisy, and give less vibration, and be more speedy; will take the hills better, and be more economical to run than a car constructed with a long stroke motor."

MAKING PEAT ALCOHOL CHEAPLY

Important Progress by European Experiments Officially Reported—Industrial Plant a Probability.

Despite the none too promising immediate outlook in connection with the commercial utilization of denatured alcohol for purposes of power production, there is no question as to the probable future extent of its usefulness, and one of the sources from which it is thought it may be derived most economically is ordinary peat, according to several authoritative sources. Considerable has been done in England in the way of exploiting peat alcohol, and now it appears that similar efforts of no small significance are being made in Continental Europe. American Consul Samuel H. Shank, of Mannheim, gives a brief review of what has been done already in this direction, in a recent report to Washington.

"The first industrial trials for manufacturing alcohol from peat date from the year 1870, when the Danish chemist Zetterlund hydrated and converted by means of sulphuric acid the cellulose of the peat into a soluble carbohydrate, which was fermented by letting it stand," he remarks." "The very small production obtained in the beginning was increased by different chemists, including Lagerheim, Thestadius, and Eckardsstrom.

"Important progress has been made in the last two years by Raynaud, by fermenting the carbohydrate sap by means of a special yeast, which has hitherto been kept secret. A Copenhagen company has been founded, which already has two experimental plants established, one in Denmark and the other in France. The results obtained are said to be so encouraging that the erection of an industrial plant in the north of Germany is imminent. According to statements made by Professor Ramsay, one ton of dry peat is said to furnish about 162 liters (42½ gallons) pure spirits and about 66 pounds of sulphate of ammonia of 100 per cent.

"The Danish company asserts that the manufacturing costs of 1 liter of alcohol of 97 per cent. are at most 11 pfennigs (2.6 cents), whereas the cost of the process of distilling from potatoes is about 38 to 42 pfennigs (9 to 10 cents). It is self-evident that such a process would be of the greatest interest, not only from an agricultural standpoint, but especially for new uses in the chemical industry and as a cheap material for lighting and power."

In this connection, the possibility of cultivating artificial peat bogs, and so of turning to some commercial account some of the marsh land which is so abundant and also so deplorably non-remunerative at present, also is a prospect which is not to be ignored.

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DEALING WITH THE DUST PROBLEM

Foreign Device that Stores Dust Raised by Car—American Invention that Returns It to the Road.

Probably no one has observed the uniform way in which the dust is thrown up behind the average motor car without becoming convinced that it would be possible to suppress the dust evil as far as the machine is concerned by the adoption of special measures of design. Indeed, within a year or two considerable advances have been made in this respect by the adoption of different contours for the rear ends of touring car bodies than were in vogue formerly. This is, of course, the ideal method of attacking the problem. A more obvious method, and one which has received attention more than once before, is that of arranging some sort of receptacle to catch and retain the dust, or to deliver it directly downward upon the road. A recent invention along this very obvious line is that of H. Birtwisle, of Manchester, England, whose dust collecting system is here illustrated.

In brief, the scheme is nothing more nor less than that of placing a funnel directly back of each of the rear wheels of the car in such a position that the upward current of air with its entrained dust will be thrown directly into it. A tube leading from the funnel conducts the dust so caught to a collecting reservoir at the rear of the vehicle from which it may be removed periodically. In order to assist in the clearing away of the contents of the funnel and tube and insure the delivery of the dust to the container, a second funnel is placed alongside the first, but in such a position that the direct blast of air due to the motion of the vehicle is taken into it. A second tube, smaller than the first, leads from this funnel into the first mentioned tube where it terminates in a jet or blast pipe, where it serves the purpose of an ejector in creating a certain amount of suction in the main funnel to aid in clearing it. The inlet to the container is at the top, while a sieve covering the receptacle permits the air to escape while retaining the dust.

The arrangement is made plain by the illustrations in which A, the funnel-shaped collector suspended directly behind the wheel, is mounted on a tube, B, leading to the dust box, C. The very energy imparted to the dust by the motion of the wheel thus serves to carry over into the box a large proportion of it. The tube, being flexible, may be adjusted in any way desired. The lifting effect is further increased by the use of the second funnel, F, which is mounted on a pipe terminating in the nozzle, E, lying within the tube, B. The effect of this is to drive up through the center of the pipe, the dust and air which are caught by the main funnel, preventing them from stagnating in the pipe, or falling back into the main funnel.

The method of mounting the receiving funnels is shown in Fig. 1, in which the dotted lines indicate how the dust collector may be swung up out of the way and held in position while changing tires or otherwise repairing the machine. In Fig. 2, the purposes of the two intakes is further emphasized by the different directions in which they "look."

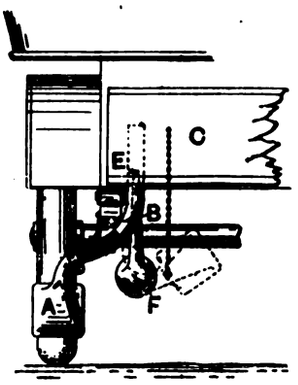


Fig. 1

The arrangement has been put to the practical test by use upon a car under various representative conditions. It is light, readily detachable from the machine, and is said to have produced thoroughly satisfactory results.

In the same connection it should be mentioned that American patents have been taken out recently on a system designed to serve the same general purpose, but with a totally different effect, in that the dust, instead of being caught and retained in the machine, is redelivered to the road surface. In order to bring this about, a conduit is formed underneath the car, leading from a

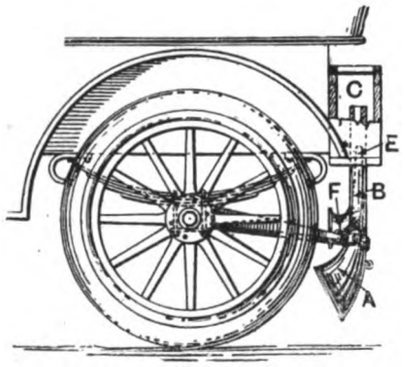


Fig. 2

large bell-mouth just under the radiator in front, to a pair of thin orifices at the back so placed as to direct a stream of air downward and backward in direct opposition to the natural upward draught concurrently caused by the action of the wheels and tires and the suction of the body. The theoretical effect is that of neutralizing the natural draught, leaving the air in the wake of the vehicle perfect inert, and permitting the dust to settle out by gravitation.

APRON FOR THE RADIATOR FRONT

Simple Home Made Appliance for Use in Fording Streams—Prevents Water Reaching the Engine.

Motorists who have experienced difficulties in connection with the occasional requirement of fording streams when touring, are probably perfectly well aware that the usual cause of the trouble rests in the stream of water which is poured in upon the engine through the radiator. In most cases, the greater part of the water thrown upon the mechanism reaches it in this way, while in the case of machines which are provided with a closed under pan, this is the only possible way it can enter the interior, unless the car be permitted to stop while in the water. A simple method of preventing trouble from this source, suggested by the Autocar, is that the radiator front be protected temporarily by an apron made of strong canvas or oilcloth.

The cloth should be cut to the exact shape and size of the radiator front, after which, explains the writer, "make a good deep hem at the top and bottom of the material, and pass a light iron rod through each hem, and secure there. An apron is thus formed like a wall map or blind, with stiff top and bottom, and can be rolled up on itself and easily stowed. Sew a strong loop of tape on the center of the lower side of the apron, and two strong tapes, each about a foot long, in the center of the upper side.

"To apply to the front of the radiator, pass the loop over the starting handle, and tie the top tapes securely round the filling cap on top of the radiator. The suction of the fan holds the apron close against the radiator, and makes it practically watertight. In this way I have crossed streams without trouble with the water one-third the way up the radiator and the bow wave washing back over the side frames against the dashboard. . . . It is well to place a cloth over the magneto connections before entering the water, to prevent splashes short-circuiting the current.

"It is safest to always enter the water with the lowest gear in, and to drive as slowly as possible, to minimize the bow wave, and remember the engine does not pull as usual with the exhaust opening several inches under water. To stop in midstream is generally fatal if the water be any depth.

"A temporary apron for an emergency can be made from a sheet of newspaper; the suction of the fan will hold it in place for a few seconds, which is often sufficient to pass a deep place in a ford."

The average car will not balk at a ford, even of considerable depth, when properly handled. But its performance depends upon the isolation of vital organs from the wet.

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TRIFLES THAT AFFECT SALES

Body Striping Causes Rejection of Acceptable Car—Big Order Lost by Refusing to Pay Demonstrator's Fine.

"I'll take the same," said the fifth and last man of the group, in response to the waiter's inquiry, and as the man departed to fill the orders the conversation was resumed.

"The selling of automobiles often reveals curious traits of human nature," remarked one of the five, as he lighted a fresh cigar. "As David Harum says, 'there's as much human nature in some folks as there is in others, if not more,' and often have I found this to be true. You would think," he continued, after a short pause, "that when a man is contemplating an expenditure of from three thousand to six thousand dollars for a motor car, his final decision would be made on the actual merits of the machine, or at least on the supposed merits. Yet often I make or lose a sale because of some trivial detail of appearance or construction, which absolutely has nothing to do with the actual worth of the car, and is totally devoid of influence on the subject of the car's performance, or the efficiency of its mechanical design. Only a few days ago I lost a sale that I thought was absolutely certain to be made. The demonstration was entirely satisfactory, and both the man and his wife liked the way the car ran and liked the appearance of it, all save for one small thing; they didn't like the striping on the body and nothing that I could say would overcome this objection. As they wanted a quick delivery and I had nothing else to offer I lost the sale. That little question of striping was of more importance to them than the whole mechanical construction of the car. I'll bet that if that car had had lead bearings and tin connecting rods they would have bought it, provided the body was painted some color that would harmonize with madame's complexion or dress or something else equally unimportant."

"Don't you think that that instance was a rare exception?" asked the broker who was one of the group. "It seems to me that men use a good deal of discrimination in buying their cars. I think the day has gone when shoddy construction can be sold to the average buyer."

"I think you're mistaken in that," responded another. "The knowledge which the layman possesses largely is superficial. He talks learnedly of spark plugs, and carburetters; asks how many speeds and what size tires; he knows the difference between air cooling and water cooling, and usually has a preference between chain and shaft drive, but when you come right down to mechanical construction he's absolutely ignorant. There is not one buyer in a hundred who knows the difference between a white bronze journal and a babbited one, and as for the physical construction of the steel in axles or crank shaft, you might as well talk Esperanto as to tell him about it. No, sir; there are mighty few men who are not very greatly influenced by appearances and reputation; for, granting that they believe what the salesmen tell them about the makeup of the car, they don't know enough about mechanics to appreciate the good features or discern the bad ones."

"Returning to the human nature side of this subject," remarked a dealer who had not previously taken part in the discussion," "I recently had an experience which involved a question of ethics. I took the side of the matter which I thought was right and have maintained my position, though in doing so I lost the sale of four cars. A city official, whose department was in the market for some cars, arranged with me for a demonstration. He laid out the route that he wanted to go over and invited two friends to accompany him on the trip. Naturally, I picked out a capable demonstrator to take the party. They were on the country road, about 50 miles from the city, and were going pretty fast when a country constable jumped out in the road and told them to 'pull up.' My man was driving the car, and instead of submitting to arrest he opened out a little more and passed the constable, who jumped for the running board, missed it and fell into the road.

"The officer quickly jumped up and, drawing a revolver threatened to shoot. At this moment the city official directed the car be stopped as he didn't want to get hit by a bullet. His instructions were obeyed, and the demonstrator was arrested. He was fined $15, and as he made no sign that he would pay it, the city official took the amount from his pocket and the journey was continued. A few days later I was requested to repay the amount of the fine to the official. I declined to do so, stating that as his instruction to the demonstrator had been responsible for the arrest, I was not in any way at fault, for had the demonstrator followed his own judgment he would have gotten safely away. I lost the sale of the cars, which may have been because of my pig-headedness, but I maintain my ethical stand is right."

For a moment there was no comment, and then one of the men took issue with the speaker.

"I think you should have paid the money or compelled your employe to do it, which is the same thing," he said. "The amount of the fine really was loaned to get your man out of trouble—it was a debt of honor which should have been paid. Undoubtedly the party could have returned by train and left your employe in jail, but rather than have him incarcerated they paid the fine. I think the obligation was on you."

"Well, responded the dealer," I do not think that you can convince me that I am in the wrong. While it is true that my representative was running the car, he was subject to the orders of the man to whom the demonstration was being given. If he was driving faster than the speed limit, the other could have stopped him, and this contention is borne out by the fact that when the official said 'stop,' my man stopped and was arrested. I maintain that a demonstrator is acting as a chauffeur to the passengers, and that the real control of the car is in their hands rather than in his. When they say 'faster," he speeds up; he follows their directions, goes over the roads they indicate and in all things is subject to their wishes. If he is arrested, they are at fault, and neither the chauffeur nor I should be expected to pay for their vagaries." And with a comprehensive gesture to the waiter, the discussion closed.

Russia Steadily Increases Her Imports.

From the returns of the Russian customs authorities it is found that automobile importation into that country is increasing at a rate which, if maintained, will soon place its market in a position to be reckoned as by no means unimportant to the industry at large. During the year 1902, 35 cars were imported; during 1903, 60; and during 1904. A setback occurred in 1905, when only 111 foreign machines were introduced into the country, but the average increase was restored during 1906, with its total of 242 cars. The latest figures obtainable—those for the first six months of 1907—reveal a total greater than for the entire year previous, the number of machines credited to that period being 257. Added stimulus is expected to be developed by the motor show which is scheduled to occur shortly.

"Ready Flated" a Registered Trade Mark.

Although it appears not to be generally known, the term "Ready-Flated," employed by the Continental Caoutchouc Co. to designate their inflated tires attached to their demountable rims, is a registered trade-mark. The fact that others have made use of the term has caused the Continental people to issue a warning on the subject.

Electric Cars for One-Armed Men.

The Pope Motor Car Co. report having built several Pope-Waverley electrics for one-armed men. The only necessary departure from the usual construction is the arrangement of an extra pedal, with ratchet effect, instead of the usual hand lever for controlling the current. The steering is done with the usual side lever.

Motor Bus Service in South India.

Ammayanayakanar and Krishnamanaikan are the terminals of a motor bus service which recently has been instituted by the South Indian Railway Co. The names of stations along the route are not given in the notice of the inauguration of the service—space was limited.

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The Week's Patents.

881,973. Vehicle Fender. Herbert A. Suttle, Chicago, Ill. Filed June 27, 1907. Serial No. 381,023.

1. In a vehicle fender, the combination of a vehicle having a supporting frame attached thereto, an upright member normally substantially vertically disposed and forming the back of the fender proper and hinged at its outer end to the supporting frame for outward movement of the upright member, and a horizontal member carried by the upright member.

881,987. Variable Speed Mechanism. Herbert I. Wilber, Dorchester, Mass. Filed April 9, 1907. Serial No. 367,223.

1. A variable speed mechanism comprising a driving shaft, a driven shaft, one or more gears operatively connected to said driven shaft, a gear or gears operatively connected to said first mentioned gear or gears to drive the same, means intermediate the driving shaft and said last mentioned gears to drive the latter, and means to vary the speed of movement of said last mentioned gears without stopping the mechanism.

882,091. Speed Change Mechanism. Alberto Balloco, Turin, Italy, assignor to Itala Fabbrica di Automobili, Turin, Italy, a Company. Filed Dec. 4, 1906. Serial No. 346,294.

1. In an interlocking mechanism, the combination of a stationary member having ribs forming parallel channels between them, said ribs having co-axial recesses therein, balls loose in said recesses, a transversely slidable member engaging the balls in the outer ribs, and sliding members in said channels having recesses on opposite sides to receive the balls in the ribs, whereby each sliding member is capable of being locked on both sides.

882,099. Apparatus for Inflating Automobile Tires. Albert J. E. Daffrin, Dieppe, France, assignor to Addison L. Melvin, Chicago, Ill. Filed Dec. 7, 1907. Serial No. 405,566.

1. An apparatus for inflating the pneumatic tire of automobiles comprising a suitable casing having means for attachment to the automobile frame, a pump pivotally mounted in said casing, a tubular plunger having a telescoping connection with said barrel, a crank shaft journaled in said casing and having its crank connected with said plunger, suitable check valves for controlling the passage of air, means for operating said crank shaft from the engine of an automobile and means for connecting the pump barrel to the tire to be inflated.

882,170. Carburetter. Charles Schmidt, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Feb. 15, 1906. Serial No. 301,169.

1. In a carburetter, the combination of a valve casing having an outlet, two valve seats which are located within the casing and on opposite sides respectively of said outlet, a sleeve which is adjustably secured within the casing and upon which one of said valve seats is formed, a valve provided with two faces which are respectively adapted for co-operation with the two valve seats within the casing, and means for operating said valve—there being fuel passages for the admission of the gas into the casing at both ends of said pump.

882,215. Tire Pump. William S. Stapley, Bridgeport, Conn., assignor to The Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 27, 1905. Serial No. 284,657.

1. In a pump, the combination with inner and outer tubes concentrically placed and a base having an eduction passage leading from the inner tube, of an inner rod and piston provided with a flexible washer whereby the piston is made operative during the upward stroke, and a plurality of rods and a piston in the outer tube, said piston consisting of rings threaded to engage each other and flexible washers clamped between said rings and engaging the inner and outer tubes respectively, whereby said piston is made operative during the upward stroke and air is permitted to pass during the downward stroke, all of the piston rods being connected to move in unison.

882,239. Automobile. Charles W. Duer, Austin, Ill. Filed Dec. 14, 1906. Serial No. 347,871.

1. In an automobile, the combination with a rear axle and obliquely set traction wheels thereon, of opposing chain sprockets set obliquely to each other to drive the traction wheels, and flexible and twistable chain belts uniting said sprockets.

822,260. Spark Plug Clip. Charles A. Mezger, New York, N. Y., assignor to C. A. Mezger Inc., New York, N. Y., a Corporation of New York. Filed Sept. 6, 1906. Serial No. 333,420.

1. A spark plug clip, comprising a body having at one end pliable fingers adapted to engage the insulated portion of the wire and a tongue struck up from the body and adapted to be electrically connected with the wire, said body also having a cupped cap with a radial slot therein and pliable prongs at the sides of the body and a fork arranged under the body and held rigidly thereto by means of said pliable prongs the bifurcated portion of the fork registering with the slot in the cap.

882,341. Method of Curing or Vulcanizing Rubber Goods. Charles L. Pepper, Indianapolis, Ind. Filed Sept. 15, 1906. Serial No. 334,791.

1. The method of vulcanizing or curing the outer shoes or casings for pneumatic tires for vehicles, which consists in supporting and securing the shoe or casing in form, applying a porous cover to the exposed surface of the shoe or casing, and subjecting the shoe or casing so supported and covered to the action of vulcanizing heat.

882,348. Spring Wheel. Henry E. Schindler, Sisseton, S. D. Filed July 6, 1907. Serial No. 382,468.

A wheel comprising a web portion consisting of a pair of annular plates secured together, said plates having their outer peripheries flanged to form a felly, and their inner peripheries bowed outwardly in opposite directions to form an internal chamber, a hollow cylindrical hub yieldingly mounted with respect to said web and provided with a circumferential flange disposed within said chamber, each end of said hub being internally threaded and provided with a notch; a threaded plug fitted in each end of said hub; and a pair of coil-springs disposed upon opposite sides of said web and reversely wound with respect to each other, each spring having one end fastened to the adjacent plate and having its other end extending through the notch in the adjacent end of the hub into the interior thereof.

882,382. Speed Indicator. Robert T. Haines, London, England. Filed April 29, 1907. Serial No. 371,006.

1. In a speed indicator the combination of a moving part driven at a speed proportional to the speed to be indicated, a spring, means actuated by said part and adapted to move in a given direction and thereby put said spring under tension, said means also actuated by said part against a resistance, and adapted to cause a slip in the transmission of power from said moving part to said spring, and an indicating means for showing the speed, substantially as described.

882,513. Power Transmitting Mechanism. William O. Worth, Evansville, Ind. Filed Nov. 21, 1906. Serial No. 344,428.

1. In a friction transmission mechanism of the class described the combination with the driving friction members of driven friction members, means for adjusting the driven friction members obliquely to the contact radius of the driving friction members and simultaneously shifting the driven friction members on different horizontal planes, whereby the driving friction members automatically move the driven friction members across the faces thereof.

882,697. Shock Absorbing Vehicle Wheel. Hervey R. Kumler, Etiwanda, Cal. Filed Jan. 30, 1907. Serial No. 354,954.

In a wheel, a hub having a flange at its inner end and a longitudinal bore at its outer end, the flange being conically recessed at its base and flat and perforated in its outer portion and the recessed end of the hub being of the same diameter and exteriorly screw threaded to a point beyond the bottom of said recess, said screw threads being continuous and uniform, a flange loosely seated upon the hub adjacent to said threaded portion having its base conically recessed and its outer portion flat and perforated, a nut on said threaded portion in engagement with the base of said loosely mounted flange, a cap on the outer end of the hub in engagement with said nut, a felly provided with shouldered recesses upon its inner surface, a series of curved spokes, the outer portion of each of which is tapered and fits in one of said recesses, the inner end of each spoke being provided with a pair of lateral, wedge shaped wings which fit in the conical portions of said flanges, two of the sides adjacent thereto being parallel and fitting between the flat sides of said flanges and the other two sides converging toward each other at the inner end of the spoke and being each provided with a half round recess which is adapted to register with the perforations through said disc, bolts through said perforations and recesses, and bolts through the outer end of each spoke and the felly.

882,718. Road Vehicle Wheel. John Slee, Newton-le-Willows, England. Filed Filed Oct. 23, 1906. Serial No. 340,164.

1. The combination of a wheel, a tire extending around the rim of the wheel and comprising a series of cradles abutting against each other and designed to yield circumferentially, and a sectional tread carried by the cradles, the abutting ends of the tread sections and the cradles alternating with each other.

882,846. Wheel Hub with Ball Bearings. Ernst Sachs, Schweinfurt, Germany. Filed Dec. 31, 1906. Serial No. 350,228.

1. In a wheel bearing, the combination with a hub barrel, of an axle journal, a plurality of ball bearings comprising concentric race-rings and balls received in grooves formed in the confronting portions of the said rings, the larger ball bearing being fixed with its outer ring in the inner end of the hub barrel between a shoulder and

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a ring screwed into the hub, and with its inner ring on the journal, the smaller ball bearing being arranged displacable so as to be released from end thrust, a fixed collar on the inner end of the journal, a nut screwed to the free extremity of the journal and a sleeve interposed between the nut and the inner race ring of the larger ball bearing, so as to secure the said race ring against axial movement between the collar on one side and the sleeve and nut on the other side.

882,861. Friction Gearing. John D. Baker, Lisbon, Ohio, assignor of one-third to Alpheus Arter and one-third to George B. Harvey, Lisbon, Ohio, Filed April 6, 1907. Serial No. 366,734.

1. In mechanism of the character set forth, the combination with a rotatable friction member, of a shaft held against longitudinal movement, another friction member slidable on the shaft, actuating means movable with respect to the shaft and second friction member to operate the latter, and yielding means interposed between the second friction member and the moving means to transmit motion from the latter to the former.

882,876. Spark Timing Apparatus. Charles C. Dodge, Wollaston, Mass., assignor to The Dodge Lubricator Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 29, 1905. Serial No. 289,617.

1. A spark timing device comprising a casing having a flat surface, one or more contacts whose surfaces are flush with the flat surface of the casing, an arm carried dicular to said flat surface, an arm carried by said arbor extending laterally therefrom, and a rotatable cylindrical contact on the end of said arbor adapted to roll over said stationary contact or contacts in its rotation.

882,905. Pneumatic Tire. Elon A. Marsh, Detroit, Mich. Filed No. 7, 1906. Serial No. 342,331.

In a pneumatic tire, in combination with an outer covering, an inner tube adapted to contain air provided with truss shaped folds extending in close relation, transversely of and partly around the tread side of said inner tube, whereby provision is made for retaining the folds in proper position for yieldng before a puncturng article and for pressing the edges of a puncture in one of said folds against each other, substantially as described.

882,911. Clutch. Thomas B. Rice, Jr., Philadelphia, Pa. Filed Sept. 25, 1905. Serial No. 279,911.

1. In a friction clutch, a longitudinally stationary member, a ring carried thereby, screws freely passing through said ring, a frictional ring carried by said screws and adjustable thereon, a longitudinally movable member, a web therefrom between said stationary member and said frictional ring, independent annular bearing faces extending entirely around the faces of said web on each side thereof, and means for actuating said frictional ring for causing the two annular bearing faces to be engaged by said stationary member and said frictional ring.

882,942. Explosive Engine. George W. Gibbs, Jr., Atlanta, Ga. Filed Nov. 15, 1907. Serial No. 402,287.

1. In an explosive engine, the combination of a power cylinder having an exhaust port at its rear end, a valve controlling the same, a fixed coaxial sleeve in said cylinder forming a compression chamber therewith and of the same diameter thereas, a hollow trunk piston operating in said power cylinder and compression chamber, conduits connecting the crank casing and compression chamber, respectively, with the power cylinder near the forward end of the piston travel, an inlet to the crank casing, and an inlet to the compression chamber.

882,946. Starting Device for Motors. Maxence J. S. A. Isnard, Grenoble, France, assignor to Paul Drevet and Louis Augustin Nove-Josserand, Lyon, France, and Noel Dumond, Tassin la Demi-Lune, near Lyon, France. Filed March 20, 1906. Serial No. 306,967.

1. The combination, with the cylinder, of a shaft mounted transversely thereof, a pinion on said shaft, a rack meshing with said pinion and movable longitudinally in said cylinder, a clutch member slidable on said shaft, and an operatve connection between said rack and said clutch member.

882,952. Variable Speed Transmitting Mechanism. August J. Meyer, Cleveland, Ohio. Filed Jan. 26, 1907. Serial No. 354,169.

1. In apparatus of the class described, the combination with driven and driving members, of an associated fluid chamber and contained fluid medium, diametrically movable vanes or blades, an arching deflector part movably positioned within the chamber and partially surrounding said vanes, whereby the action of the fluid medium on the blades is controlled, and means for governing the position of said deflector-part, substantially as set forth.

882,968. Variable Speed Driving Mechanism. Richard M. Ruck, London, England. Filed Aug. 10, 1907. Serial No. 388,027.

1. A variable speed driving mechanism comprising a cone constituted by juxtaposed rings having progressively varying numbers of gear teeth and fixed side by side upon a common axis so that a straight row of teeth extends from end to end of the cone, a toothed pinion movable in the direction of its own axis so as to be capable of gearing with any one of the toothed rings alternately, a drum mounted to rotate about an axis parallel to that of the pinion at an angular velocity corresponding to that of the cone and carrying a row of studs corresponding in number and distance apart to the number and width of the individual toothed rings of the cone; a slide movable parallel to the axis of the pinion and adapted to shift the pinion lengthwise of the cone; cams carried by the slide and respectively adapted to be brought into position to co-act with the studs so as to shift the pinion in one or the other direction; and means for moving either of the cams into and out of said position at the proper moments with reference to the bringing of the straight row of teeth on the cone into the common plane of the axes of the cone and pinion.

882,986. Axle. Otto Zachow and William Besserdick, Clintonville, Wis. Filed Aug. 1, 1907. Serial No. 386,612.

A device of the character described, comprising an axle and a spindle coupled together by a universal joint, a semi-globular journal casing, bearing rings seated in said journal casing, a correspondingly shaped skein member, stub axles or trunnions having heads threaded into said skein members and inserted through said bearing rings, said heads being provided with races containing ball bearngs adapted for pivoting

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said skein member upon said journal casing, and a semi-globular hub member having a sleeve extension at its outer end, a locking ring threaded upon said sleeve extension, means for the retention in place of said hub member at its sleeve extension end against endwise displacement, said skein member having an nnular flange at its inner end, and a hub member having a corresponding recess opposed to said flange, cone sections being arranged in said annular recess and retained by said flange, ball bearings interposed between said cone-sections, said hub meber having its sleeve extension provided interiorly with an annular ledge or shoulder and said skein member having a like sleeve extension, additional cone sections arranged within said hub sleeve extension and between said ledge and said skein sleeve extension, with ball bearings interposed between said additional cone sections, said locking ring and annular ledge or shoulder being adapted to effect the retention of said additional cone-sections in place.

882,998. Six Wheeled Logging Automobile. Nathan F. Coffey, Black Rock, Ark. Filed Oct. 1, 1907. Serial No. 395,362.

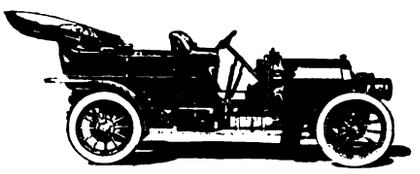
1. The combination, with a main truck, of a two-wheeled extension truck connected to said main truck, a derrick post on said extension truck, a capstan on said main truck, and a cable extending from said capstan over pulleys on said derrick post for the purpose specified.

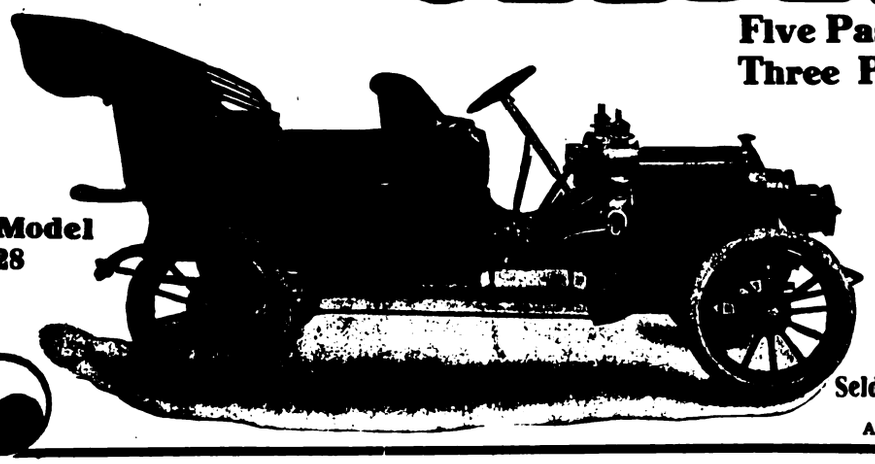
883,113. Suspension Device for Motor Frames. Harry A. Knox, Springfield, Mass. Filed Oct. 17, 1906. Serial No. 339,347.

1. In a motor frame of the three-point suspension type, a forward axle, a spring post secured thereto and having oppositely extending arms, a spring yoke carried by said axle and connected to the reaches of the frame, and springs located between the outer ends of the yoke and the axle.

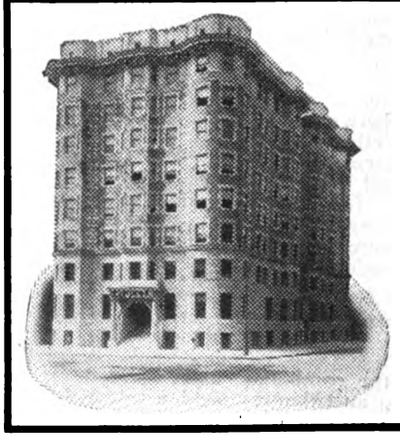
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AN ATTRACTIVE CAR AT AN ATTRACT[illegible] PRICE
SPECIFICATIONS—Engine, 4 cylinders, 4[illegible] 28-30 brake horsepower. Transmission, 3 speeds [illegible] and reverse, selective, Timken bearings. Wheel [illegible] 109 inches; tread, standard; clutch, cone [illegible] Body, sheet metal, straight line type, roomy and [illegible] fortable. Tires, 32x3½, quick detachable; main [illegible] tional. Frame, pressed steel, 4¾ inches deep. [illegible] axle, single I-beam drop forging, ball bearings. [illegible] axle, bevel gear drive, enclosed type, roller bear[illegible] Ignition, synchronized jump spark. Weight, [illegible] 2,200 lbs. (actual, not catalogue).
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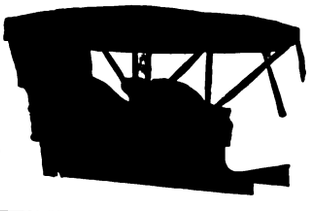
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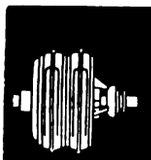
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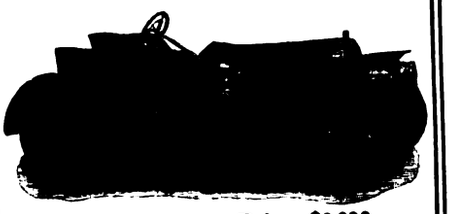
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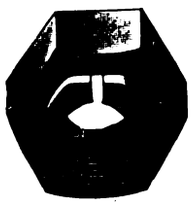
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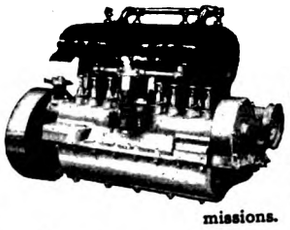




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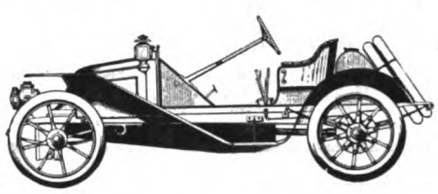
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Mainly because Franklins don't wear themselves out. They don't pound the roads like a heavy, half-spring machine. They don't shake themselves to pieces. They are not over-powered.

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Franklin construction is scientific—light-weight but strong. Probably more of the best materials and more labor are put into Franklins than into any other automobiles. And Franklins cost about 50 per cent. more per pound to build.

They have no water-cooling system. That saves weight and trouble. And the air-cooled engine gets more work out of the fuel. And there is the saving of tires.

The operating and depreciation cost of the average heavy 5-passenger, water-cooled machine is usually 50 per cent. more than that of the Franklin Type D—in some cases more.

Did anybody ever know a Franklin to wear out?

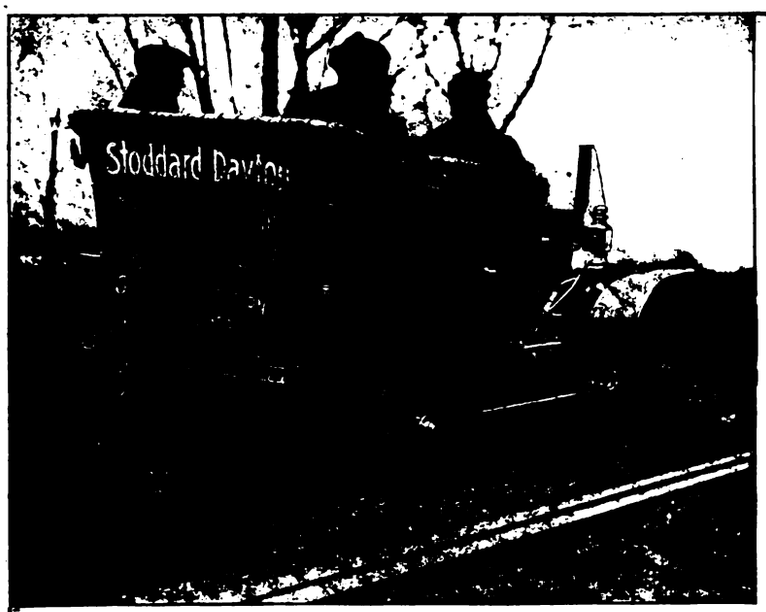
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LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL**, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x 5/8—1 x ½ x 9-16 roller	$1.00 per foot.
1 x 5/8 x 5/8 roller	1.17 "
1¼ x ½ x 5/8—1¼ x 5/8 x 5/8—1¼ x 5/8 x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat. etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS**, and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Broad St., Philadelphia, Pa. 227½-229 Jefferson Ave., Detroit. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo. 1392 Bedford Ave., Brooklyn, N. Y.

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Empire Tires
WEAR LONGEST

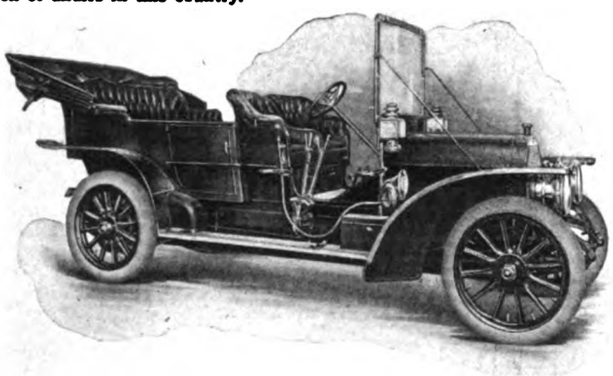
EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

Matheson

ONE YEAR GUARANTY

Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



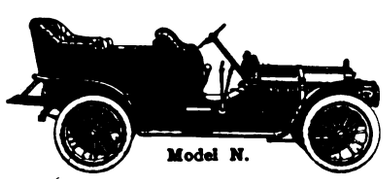
DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.
Licensed under Selden Patent.

National
Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with **Ball Bearings throughout, including the motor.**


Model N.

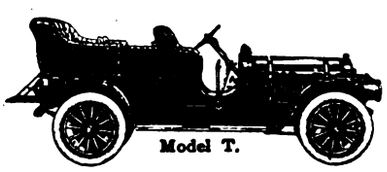
Model K—4 cyl., 4⅞ x 5
$3,500

Model N—4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x 4¾
$4,200

Model T—6 cyl., 5 x 5
$5,000


Model T.

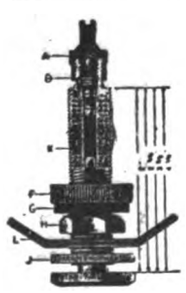
Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.
1007 E. 22d Street INDIANAPOLIS, IND.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE

Trade Mark Registered April 30, 1895



SIMPLE AND ABSOLUTELY AIR TIGHT

¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

¶ Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by **A. SCHRADER'S SON., Inc., 28-30-32 Reed St., New York**

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"Firestone" Pneumatic Tires

"The Tires of Sterling Quality"

are the best work of master tire builders.

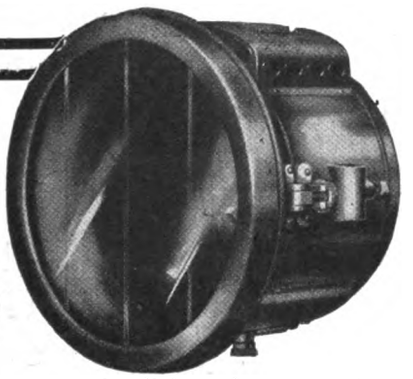
Made of the finest materials—by the most skilled workmen—under the watchful eye of critical experts—they establish the standard of tire excellency.

BRANCHES AND AGENCIES ALMOST EVERYWHERE

Firestone Tire & Rubber Co.

Akron, Ohio

Exclusive Features of Solar Lamps



(7) SIMPLICITY

By simplicity, we mean simplicity of construction; fewer parts; non-use of solder except where it is absolutely necessary; assembling through the use of interior screws or rivets. Consider the simplicity point in purchasing an automobile lamp—it is vitally necessary.

Solar Lamps have fewer parts; less solder; are all assembled by internal screws. Therefore far more simple in construction.

Write for 1908 Catalog.

Badger Brass Manufacturing Company

Solar Lamps SHOW THE WAY

606 Lyman Avenue KENOSHA, WIS.

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



New San Francisco-Los Angeles Record.

A 30 horsepower White Steamer, carrying four passengers, set up a new record from San Francisco to Los Angeles on April 28th, 1908, covering the 478-mile mountainous journey in 17 hours and 17 minutes, thus cutting 56 minutes from the former record which had stood for nearly two years. Furthermore, the record-breaking White was at once driven back over the road to San Francisco in 19 hours and 43 minutes, thus establishing a round trip record of 37 hours.

WRITE FOR CATALOG, BULLETINS AND WHITE ROUTE BOOKS

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. Boston, 320 Newbury St.
San Francisco, 1460 Market St. Chicago, 240 Michigan Ave.
Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave.
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The "Maxwell"

Notwithstanding We Won

Over eighty per cent. of all the hill climbing events in which Maxwell cars have entered this season, I do not think, nor would I have you believe, that this is the best evidence of the superiority of Maxwell cars for your use.

The average buyer insists that his car take every hill on the high. A little thought should convince him that the ability to do this is just as likely to indicate qualities the reverse of desirable.

Any car that is "over-powered" is liable to make a splendid showing in hill climbing events, but will it withstand hundreds of repetitions of its spectacular stunts?

Now if you could have but one of the two qualities —a fast hill climber or a car capable of consistent performance day after day, year after year—which would you buy? As a business man you can decide only one way. No experienced motorist would hesitate a minute—he'd choose the dependable car.

The ideal car is one—you'll agree—that possesses both the above qualities insofar as that is practicable. That's where you and I reach common ground—you have named the Maxwell car. I believe honestly it is the ideal car when judged by that standard.

Here's a definition of consistency—"Any Maxwell will repeat anywhere, any time, any feat previously performed by any Maxwell anywhere else."

Benj Briscoe
President.

MAXWELL-BRISCOE MOTOR CO.

Members A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

AJAX WRAPPED TREAD TIRES

IF
a man's word
is
as good as his bond,
then
he ought to be willing
to give you
the bond.

There's only one
maker
of pneumatic tires
who
is willing and does
give his bond
to back up his claims.

That's us—makers of
AJAX Wrapped Tread
Tires.

Every AJAX Tire
sold
is accompanied
by a written Guarantee
for 5,000 miles.

We give you
our word
for AJAX quality—
our bond
for actual service.

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY

GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.

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Here's the Car the World Has Waited For

The Cadillac Company Realizes the Dream of the Age—A Multi-cylinder Car of Tremendous Strength Brought within Reach of the Masses by Scientific Methods of Manufacture on a Huge Scale:

FIRST LOT OF 10,000 NOW UNDER WAY.

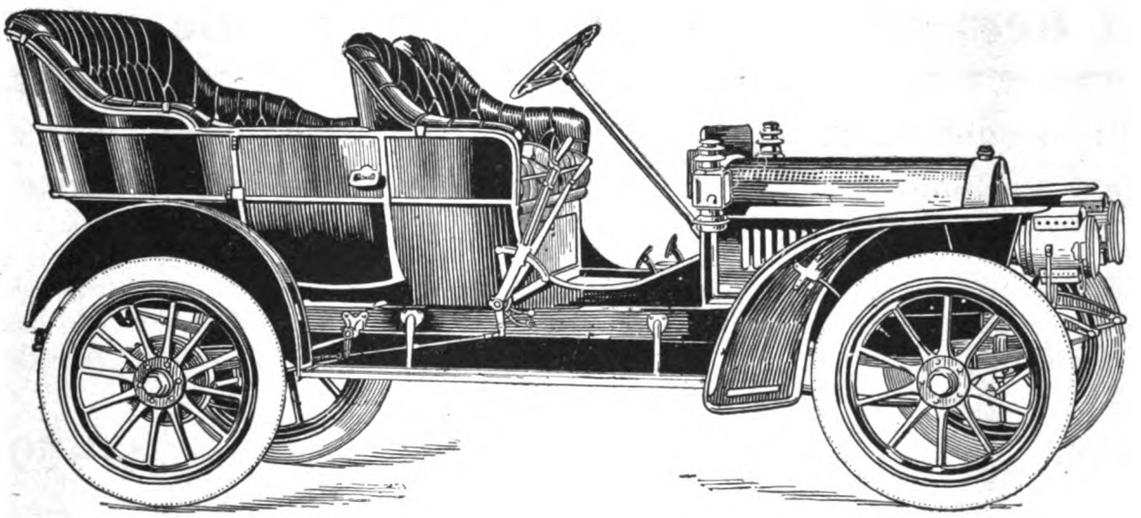
The New Four-Cylinder, Five Passenger, Thirty Horsepower

Cadillac

"Thirty"

An All Steel Masterpiece of Mechanical Simplicity and Service. To Be Sold for $1,400

Four Cylinders, Copper Jackets, 30 Horsepower; Selective Type, Sliding Gear, 3 Speed and Reverse Transmission; Wheel Base 101½ inches; Tires 32x3½ inches; Shaft Drive; Platform Springs; Seats Five Comfortably.



Historians will date the new era in automobile manufacture from July 1st, 1908.

With the advent of the Cadillac Thirty there enters an economical epoch which transforms the touring car from the luxury of the few into the vehicle of the many.

Obedient to the law of progression and demand, the first four cylinder touring car of **unlimited power,** and of a type hitherto sold for twice and thrice as much money, has arrived at a strictly popular price.

That such a car should come was inevitable. That it should arrive so soon is a triumph of American manufacturing methods and a tribute to the far-sightedness of the American people.

The people began to predict its coming in the infancy of the industry. In the last analysis they **compelled its construction;** because the law of public demand **must be obeyed by the manufacturer.** The Cadillac Company realized that inexorable law five years ago, and began then to build, and labor, and plan, to accomplish the seemingly impossible.

Back of this wonderful new car is a million dollar investment in buildings and equipment, all constructed and installed for the special purpose of cutting down the cost of manufacture. When you see the first Cadillac Thirty on the streets of your city you can call it the million dollar car, if you like, because no lesser amount would have made it possible.

Other low priced cars there have been, but **no car like the Cadillac Thirty,** because no other plant in the world is equipped to produce such a car at such a price.

The Cadillac factories were built with the conviction that the automobile has come to stay for all time; that the horse driven vehicle would eventually pass away; and that **the automobile of the future must be a car of universal use and service,** brought down in price by perfect manufacturing methods to the level of every home owning family in the land.

The Cadillac Company five years ago was the first to conceive and carry out the idea of producing a small car at a low price by building in large quantities. Sixteen thousand of these cars were built, and they are all running today on the roads and streets of America.

By a logical process of evolution the Cadillac Company is also the first to solve the great problem of producing at a popular price a perfect car of greater size and power, which will go anywhere and do anything any car at any price will go or do.

Judge the new Cadillac Thirty by the same standards you would apply to the highest grade, highest priced cars in America. Expect it to do all that the finest thirty horsepower four cylinder car you know can do.

We pledge you the word of the Cadillac Company that you will not be disappointed—that you will get $3,500, yes, $5,000 worth of service as it has obtained heretofore, for $1,400.

We would suggest that you place reservations with your Cadillac dealer, as orders will positively be filled in the rotation in which they are received.

Deliveries Will Begin October 1st in Every Leading City in America.

CADILLAC MOTOR CAR COMPANY, (*Members A. L. A. M.*) **Detroit, Michigan**

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Rambler

Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any $4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., $1900

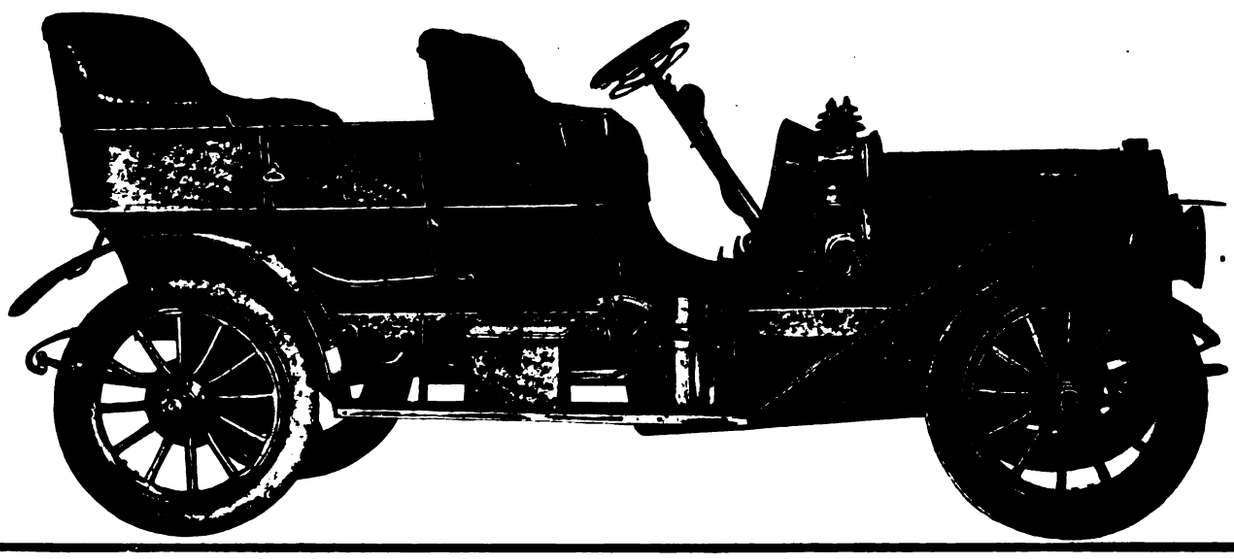
Write today for special circular aescribing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

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Chicago **Milwaukee** **Boston** **Philadelphia** **San Francisco**



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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, June 4, 1908. No. 10

POPE RECEIVERS REVISE PLANS

Ask for Authority to Continue the Business Another Year—New Basis for Reorganization to be Proposed.

Checks for the 25 per cent. dividend which the courts authorized to be paid, will be mailed next week to the creditors of the Pope Mfg. Co. by the receivers. Meanwhile, the latter have petitioned the United States Court in New Jersey for authority to continue the business another year, and the court has set June 17th as the date for the hearing on the petition.

The plans for the reorganization of the Pope Mfg. Co. have undergone some modification. It now is the purpose to offer the creditors 50 per cent. in cash and the remaining 50 per cent. in interest bearing notes of 12 and 24 months, the creditors, if they desire, to elect a majority of the directors who will serve until the notes are paid. It is understood that most of the merchandise creditors are favorable to the proposal and that the Pope prospects are unusually bright, is evidenced by the action of a Chicago concern, which makes a business of such things and which is seeking to buy up the creditors' claims at 75 cents on the dollar.

Auction Sale Without an Explanation.

At an auction sale of stocks, bonds, etc., held yesterday at 14 Vesey street, New York, by Adrian H. Muller & Son, there was sold three different parcels of Wyckoff, Church & Partridge's holdings, viz.: (1) "$140,000 of the first mortgage bonds on all the right, title and interest of every name, nature and kind, of the firm of Wyckoff, Church & Partridge, in and to the leasehold of the premises 1743 Broadway, New York, and all the machinery, tools, implements and personal property of every kind and nature on said premises belonging to said firm. (2) Assignment of all interest of Wyckoff, Church & Partridge in foreign automobiles, known as the 'C. G. V.' cars. (3) All right, title and interest of Wyckoff, Church & Partridge in $12,000 cash, said to have been paid to the 'C. G. V.' company, of Paris, as a guaranty for the payment of cars agreed to be taken by said Wyckoff, Church & Partridge throughout the year."

Seventy thousand dollars was bid for the first parcel, while the second and third parcels were sold together for $2,500. The names of the buyers could not be learned. In answer to the inquiry of a Motor World representative, Mr. Church, courteously declined to give any explanation of the sale. He said that the subject "is of interest only to our firm and its bankers."

Shake-up of the De Dion Company.

Some little interest has been arounsed in France recently over the reorganization of the De Dion company which has been so well known. A new directorate has been formed, including several new names, and the capital has been increased to 15,000,000 francs, or about $2,880,000. The name De Dion-Bouton et Cie has been dropped, and the reorganized concern will be known by the more formal title of the Société Anonyme des Etablissements De Dion-Bouton.

Barnes Joins Billings & Spencer.

Claire L. Barnes, sales manager of the Detroit Steel Products Co., has resigned that office to assume a similar position with the Billings & Spencer Co., of Hartford, Conn. Barnes, who is known the length and breadth of the manufacturing trade, will continue to "swing around the circle" in addition to fulfilling the office duties to which sales managers are heir.

Buys Bankrupt Motor Buggy Plant.

The Advance Motor Vehicle Co., of Miamisburg, which has been incorporated under the laws of that State, has acquired the assets of the Hatfield Motor Car Co., which made motor buggies at Miamisburg, Ohio. The business was purchased at a receiver's sale.

MICHIGAN MEN IN A BIG DEAL

Everitt, Metzger and Flanders Form Million Dollar Company—Particulars Made Public at a New York Dinner.

Formal announcement of the birth, in Detroit, Mich., of the Everitt-Metzger-Flanders Co., was made in New York City on Tuesday evening last, 2d inst. The announcement was not wholly unexpected. It had been known for several weeks, or since W. E. Metzger retired from the Cadillac Motor Car Co., that rather momentus transactions were in progress, in which Metzger, who holds a large stock interest in the Northern Motor Car Co., and B. F. Everitt, the head and front of the Wayne Automobile Co., were concerned. Mr. Everitt already had attracted to his company W. E. Flanders, former factory manager of the Ford Motor Co., and Thomas Walburn, superintendent, E. LeRoy Pelletier, advertising manager, and other experts of the Ford staff and that these accessions presaged large doings performed in a large way was fairly plain.

The Everitt-Metzger-Flanders Co. is the result. Capitalized at $1,000,000, it has been organized and incorporated under the laws of Michigan with the following officials: B. F. Everitt, president; W. T. Barbour, vice-president (president Detroit Stove Works, largest stove works in the world). Directors: Charles E. Palms, banker, Detroit, treasurer; Dr. J. B. Book, banker, Detroit; Albert D. Bennett, banker, Pt. Huron; Wm. E. Metzger, secretary; W. E. Flanders. Messrs. Barbour, Bennett and Metzger are heavy stockholders in the Northern Motor Car Co.

The active management of the new company will be in these hands: B. F. Everitt, president; W. E. Flanders, general manager; Thomas Walburn, general superintendent; Wm. E. Metzger, sales manager; E. Le Roy Pelletier, advertising manager.

The new company succeeds to the plant

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and busines of the Wayne Automobile Co. and it is probable that shortly there will be merged with it another Michigan concern which now is operating two factories in that State.

The product of the Everitt-Metzger-Flanders Co., which, incidentally, will be licensed under the Selden patent, will be a high grade but popular priced car styled the Everitt. It will employ a four cylinder, 30 horsepower motor, will have a 103-inch wheel base and will be offered with a variety of body designs—runabout, roadster, touring car, limousine and taxicab. The price will not exceed $1,200 for the touring car and $1,150 for the roadster but the exact figures will not be fixed until the manufacturing cost has been definitely determined. No malleable castings will enter into its construction; steel stampings, pressed steel and forged steel parts will be used instead.

It is the intention to produce the Everitt cars in enormous quantities. The first samples are expected to be on the road next month and between that time and September of next year, the plans call for an output of 12,500 cars.

The first public announcement of the new company and its plans was made at a dinner in Cafe des Beaux Arts, New York, on Tuesday last, E. Le Roy Pelletier being the guiding spirit of the function. Most of those present were New York automobile writers and their wives, Pelletier stating that having "discovered that some men in New York really love their wives," he had dared to undertake the innovation of having ladies present on such an occasion, and during the evening the ladies had bouquets, both floral and verbal, handed to them. It really was a happy occasion, several times referred to as a "christening," which led one of the verbal bouquet-throwers to remark that no car ever had "a more charming lot of godmothers." Typical of the good feeling that exists, despite commercial rivalries, Benjamin Briscoe, president of the Maxwell-Briscoe Motor Co., acted as toastmaster. He was seated at the same table with Mr. Metzger, E. P. Chalfant, assistant manager of the Association of Licensed Automobile Manufacturers, and Alfred Reeves, manager of the American Motor Car Manufacturer's Association. Mr. Everitt occupied a chair at the adjoining table with Mr. Pelletier—when Pelletier was seated. Briscoe was in fine form and had a lot of fun at the expense of those whom he introduced and at the cost of the "hyphenated combination," as he referred to the new company. But he was graceful in his compliments, also. The new company and its officers were heartily felicitated by all the speakers, among whom were Messrs. Everitt, Metzger, Reeves and Pelletier, and Joe M. Gilbert, of the Continental Caoutchouc Co., Horace DeLisser, of the Ajax-Grieb Rubber Co., Roy McCardell, the New York World's humorist, Baron Schwarzkopf, whom the toastmaster erroneously introduced as a mere count, and John C. Wetmore, one of the noblest of the pencil-pushing Romans.

The Week's Incorporations.

Owosso, Mich.—Reliance Motor Truck Truck Co., under Michigan laws, with $2,000 capital.

Minneapolis, Minn.—National Automobile Fender Construction Co.; capital increased from $55,000 to $125,000.

Jersey City, N. J.—Lincoln Auto Co., under New Jersey laws, with $12,000 capital. Corporators—Sidney Newbork, Eva Alexander, Katherine McCorack.

San Jose, Cal.—Auto Parcel Delivery Co., under California laws, with $10,000 capital. Corporators—Raymond Titus, Robert Lee Wallace, Stuart W. Mahaffey, San Jose, Cal.

Allentown, Pa.—Lehigh Valley Motor Car Co., under Pennsylvania laws, with $10,000 capital. Corporators—J. M. Mack, Max M. Mohr, Charles S. Dilcher, Samuel J. Kistler.

Boston, Mass.—American Automobile Co., under Massachusetts laws, with $50,000 capital. Corporators—C. A. Haskin, Jamaica Plains, Mass.; Bernard R. Dorman, Somerville, Mass.

Dandridge, Tenn.—Dandridge Automobile Co., of Jefferson County, under Tennessee laws, with $1,500 capital. Corporators—S. T. Harris, J. T. Holt, L. M. King, B. Rainwater, H. P. Shelton.

Miamisburg, O.—Advance Motor Vehicle Co., The, of Miamisburg, under Ohio laws, with $10,000 capital. Corporators—George Behlen, T. J. Kauffman, James A. Kauffman, Jacob Klee, D. H. Allen.

New York City, N. Y.—Comstock Shock Absorber Co., The, under New York laws, with $50 000 capital; to deal in automobiles, motorcycles, etc. Corporators—W. A. Moon, A. M. Austin, J. R. Swan, New York City, N. Y.

Buffalo, N. Y.—International Automobile League, under New York laws, with $25,000 capital; to manufacture automobiles, etc. Corporators—Alfred C. Bidwell, 234 Division street; William Preiss, 160 Franklin street; Charles H. Bowe, 58 Genesee street, Buffalo, N. Y.

Demonstrator Sues for Big Damages.

Whether an employer is responsible for injuries sustained by his demonstrator is the somewhat unusual question which the circuit court of St. Louis has been called upon to decide. The St. Louis Car Co. has been made the defendant in a suit for $25,000, brought by C. Gratiot Cabanne, one of its former employes, who alleges that he has been injured to that amount. The plaintiff, who at one time was a detective, and later in the employ of the defendant company as a demonstrator, was riding with a prospective customer to whom he was demonstrating the car when, as he alleges, the steering gear gave way and the car collided with a tree. The plaintiff alleges that the accident was due to the negligence of the manufacturers—his employers—and prays the court for compensation for the injuries which he received because of the collision.

Instalment Purchaser Gets Money Back.

A jury in Judge Sturtevant's court in San Francisco last week returned a verdict for $6,850 in favor of R. R. Bray, an automobile dealer, against George W. Lowery, who formerly was in the same business, but who now is a bookmaker. Bray contracted to buy three cars from Lowery in May, 1907, for $8,250. In installments of various amounts $6,000 was paid, and by agreement one of the cars was sold for $850, with which sum Lowery credited Bray, making his total payments equal to $6,850. In December last Lowery had the two remaining cars put up for sale at auction, claiming he had the right to do so because Bray had not kept up his payments. Lowery bought the cars in himself for $1,450. Thereupon Bray brought suit for the $6,850 he had paid Lowery, and the jury found that he was entitled to it.

Annual Election of Boston Dealers.

At the annual meeting of the Boston (Mass.) Automobile Dealers' Association on Monday, 1st inst, the following officers and directors were elected: President, John H. MacAlman, Columbia; vice-president, J. S. Hathaway, White; treasurer, F. A. Hinchcliffe, Winton; clerk, Chester I. Campbell. Directors: John H. McAlman, J. S. Hathaway, F. A. Hinchcliffe, J. W. Maguire of J. W. Maguire Co., A. P. Underhill, of Reed-Underhill Co.; C. E. Fay, Ford; C. F. Whitney, of Park Square Automobile Station; E. A. Gilmore, of Whitten-Gilmore Co., and George H. Lowe, of Lowe-Crawford Co.; secretary, Chester I. Campbell. Chester I. Campbell was unanimously elected manager of the Boston Automobile Show for 1909.

Nebraskan Company Building a Factory.

Work on the Jonz factory in Beatrice, Neb., has been commenced, and its completion is expected, about the middle of July, when the company plans to begin the manufacture of automobiles. The building will be a two-story structure 50x100 feet.

Kauffman Brings Novelties from Europe.

Carl Kauffman, manager of the Motor Car Equipment Co., New York, returned last week from his European visit. He brought with him several novelties in the accessory line.

De Lisser to Visit the Pacific Coast.

Horace De Lisser, general manager of the Ajax-Grieb Rubber Co., leaves on Sunday next for a trip to the Pacific coast. He will visit the various branches of the company en route.

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APRIL EXPORTS SHOW FALLING OFF

Despite Gains in Five Foreign Fields, the Loss Aggregates $166,687—Nearby Countries the Weak Spots.

April proved a month of declining business in the matter of exports of automobiles and parts. The combined value of the 242 cars exported during the month amounted to $460,090, whereas the value of the 397 cars exported in April, 1907, was $638,014, revealing a loss of some $178,000. A gain of $11,237 in the value of components, however, brought down the net loss to the industry to $166,687.

Five divisions of the foreign field showed a movement against the decline. That known as Other Asia and Oceania led with $17,881, with the United Kingdom, France, South America and British Australasia following in this order. The first two countries named gained by upwards of $13,000 and $12,000 respectively. Of the divisions suffering a decline, the most noticeable depreciation is that credited to British North America, which fell away no less than $108,000. Mexico with $52,300, "Other Europe" with $37,200, and the West Indies and Bermuda followed, the depreciations being given in round numbers.

Despite a continued decline, the aggregate figures for the ten months ending April 30th reveal a net gain of $3,331 as compared with the corresponding returns of one year ago. It is worthy of observation also, that only 1,977 cars were exported during this period as compared with 2,286 last year. The gain of the United Kingdom was $387,022. France's gain was second in order, amounting to $128,645, while the gains of the West Indies and Bermuda, "Other Asia and Oceania," Italy and South America, were upwards of $22,000. The losses; which were divided over six geographical groups, were significant in the cases of Mexico, British North America, "Other Europe" and British Australasia.

	April		Ten Months Ending April		
	1907	1908	1906	1907	1908
Automobiles and parts of:—					
*Automobiles	$638,014	$460,090	$2,473,207	$3,603,298	$3,619,237
Parts of	48,130	59,367		501,439	488,831
Exported to—					
United Kingdom	174,277	187,518	616,177	983,921	1,370,943
France	81,230	93,615	170,601	358,648	487,293
Germany	17,048	13,249	57,259	102,556	104,494
Italy	79,392	78,220	227,588	205,519	231,296
Other Europe	50,658	13,476	123,233	216,918	116,617
British North America	174,448	66,129	435,850	870,332	715,770
Mexico	64,409	12,127	293,002	692,652	339,218
West Indies and Bermuda	11,752	4,184	224,676	183,552	234,478
South America	11,214	14,307	61,780	170,270	192,199
British East Indies	7,003	5,958	31,046	33,086	26,947
British Australasia	3,511	4,848	148,124	189,454	147,812
Other Asia and Oceania	7,264	25,145	44,096	76,976	112,651
Africa	.....	.....	26,925	8,673	7,161
Other countries	3,938	681	12,850	12,180	21,189
Total automobiles, and parts of..	$686,144	$519,457	$2,473,207	$4,104,737	$4,108,068

* Number not stated prior to July 1, 1906.

Trade Association's Annual Meeting.

At the annual meeting of the stockholders of the New York Automobile Trade Association, Inc., held at their office in the Bryant Park building, on Monday last, the following officers were elected for the ensuing year: Frank Eveland, A. G. Spalding Bros. Co., president; Gen. John T. Cutting, Oldsmobile Co. of New York, 1st. vice-president; E. C. Partridge, Wyckoff, Church & Partridge, 2d vice-president; Ben Blumenthal, West End Auto Palace, treasurer; Walter R. Lee,, secretary and manager. Directors: C. Andrade, Jr., R. M. Owen Co.; W. M. Harradon, Victor Auto Storage Co.; Richard Newton, Atlantic Motor Car Co.; C. P. Skinner, Mitchell Motor Co.; R. B. Van Dyke, American Locomotive Automobile Co.; S. B. Bowman, S. B. Bowman Automobile Co.; Geo. W. Bennett, The White Co., and Peter Fogarty. An amendment to the by-laws providing that all officers, except the secretary, shall be chosen from the members of the board of directors was unanimously carried, thereby increasing the number serving on the board from nine to twelve.

New Cadillac Model Announced.

No small importance attaches to the announcement made this week that the Cadillac Motor Car Co. has already commenced operations on a new four-cylinder, five-passenger model to be known as the "Cadillac Thirty," which will embody a number of important features, notably in its medium power and high endurance, and will list at the moderate price of $1,400. The mechanical characteristics of this machine will be its 4-cylinder motor with copper water jackets, its 3-speed, selective type, sliding change gear and propeller shaft drive, its platform suspension and the comfortable accommodation it will afford for the passengers. The wheel base will be 101½ inches, and the wheels are to be shod with 32 by 3½-inch tires. The machine will be produced on a large quantity basis, the requisitions for the first lot calling for parts for 10,000 cars.

COURT FINES A PRICE CUTTER

Weed Brings Times Square Concern to Book—Legal Light on the Status of Manufacturers' Price Lists.

Despite the fact that only this week the United States Supreme Court rendered a decision holding that the possession of a copyright did not carry with it the right to uphold the fixed prices of books, Judge H. G. Ward, of the United States Circuit Court, for the Southern District of New York, held to the contrary in a suit in which was involved the patents on the Weed chain tire grip. Incidentally, the action indicates how to maintain list prices.

The decision was brought out in the case in which Harry D. Weed, et al., appeared as complainants before Judge Ward and applied for an injunction to restrain the Times Square Automobile Co., of New York from "advertising, soliciting orders, disposing of or selling Weed chain tire grips." The complainants alleged that it "sells its chain tire grips upon the condition printed on the bags containing the grip and on a metal bound card attached to the bag, and also to the chains, that they are licensed for use and sale only when sold to the public at the price marked upon the bag."

In issuing a temporary injunction Judge Ward said: "The proofs make it quite clear that the defendant has bought from jobbers and is selling the grips at lower prices, with full knowledge of the condition which the complainant has placed upon their sale and use, and is standing upon its right to sell what it buys at any price it chooses. This cannot be done under the decisions in Hester Fastener Co. vs. Eureka Specialty Co., 77 F. R. 288, followed in this court in Cortelyou vs. Johnson, 145 F. R. 933. The defendant being really a licensee cannot dispute the validity of the complainant's patent."

Shortly after the issuance of the injunction Rosalie Greacen, an employe of the Times Square Automobile Co., sold Weed grips at a cut price, and the Weed company asked that his employers be punished for contempt of court. At the hearing on the motion it was alleged by the defendants that the girl knew nothing of the injunction and unintentionally had committed the act of contempt. Judge Ward found the defendants guilty and fined them $100, and stated in his decision that even if the girl was "personally unaware that the order had been made, it is quite plain she was permitted to make the sale by Jacob Bernstein, a salesman who did know. The defendant is, therefore, guilty of contempt and must pay a fine of $100, of which $50 to the United States and the balance to the complainant as compensation for losses and expenses incurred."

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Oakland Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail light, generator, horn, tools, jack, pump and batteries. Top, $75.00 extra.
Runabout, $1,300.

Do You Know What You Want?
Do You Want Anything More Than the Oakland Gives?

The man who parts with his good money for an automobile in these days is looking far beyond the first cost of the car. He wants in the first place to pay no more than a fair price for his car, but his real point of investigation is the cost of maintaining it after he has purchased.

The Oakland is made for this man.

It is designed and built for the man who runs but **one** car. It is made for the man who wants a car that is big enough to take his family out for a ride, and not too unwieldy for daily use about town when engaged in business.

It has all the power, style, and comfort which the exacting motorist is right in demanding, but the whole design and purpose of the car is to give the utmost value and the greatest service for the least possible expenditure.

Economy in Up-Keep an Oakland Feature

The Oakland car has been so refined in construction and design, with the number of working parts reduced to a minimum, but it **weighs from 500 to 1,000 pounds less than other two and four cylinder cars of equal horsepower.**

Aluminum is used freely throughout in its building, and it has less adjustments and working parts by over 50 per cent. than other cars of equal power and capacity.

The prompt and silent motor delivers through its straight line drive shaft full 20 horsepower to the rear axle.

The Oakland motor is a triumph of automobile designing—a two cylinder vertical motor that is perfectly balanced and free from vibration.

In appearance, performance, and cost, this is the car that most completely meets the demands of the discriminating buyer. It is an unusually good proposition for the better class of agents. Will you write to-day for further information?

OAKLAND MOTOR CAR CO., Pontiac, Mich.

SEND FOR NAME AND ADDRESS OF OUR NEAREST REPRESENTATIVE.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . . $2.00
Single Copies (Postage Paid) . . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 4, 1908.

The A. C. A. and Its Workings.

"Lest we forget," and before the affair is made appear what it is not, i. e., an embroglio over the Vanderbilt cup rules, it is well to point out (1) that despite its present untenable attitude, the very fact that the Automobile Club of America, so-called, was until two months ago a member of the New York State Division of the American Automobile Association, is proof that it recognized what every one else in America recognizes, that is, that it is a purely local club without national authority or functions; (2) that it "got mad and refused to play" and withdrew from the A. A. A. not because of the Vanderbilt cup rules or any other after-excuse, but because it could not dictate the legislation for all of New York State, the legislation which it sought to impose involving (1) license fees up to $40 per year; (2) fines up to $1,000; (3) revocation of the citizens' right to the use of the common roads and, substantially, confiscation of his private property. The Automobile Club of America (of New York) performed one other service of doubtful benefit to American interests and that serves further to doubtfully endear it to American hearts: Its foreign correspondent committed the manufacturers and sportsmen of this country to a rule restricting sport to four-cylinder cars, thus effectually barring "sixes" and "doubles," of which there are many in America.

The State of the Trade.

To that oft-repeated and frequently embarrassing question—How's business? a variety of answers may be given, according to the depth or superficiality of the respondent's reasoning. If the question were asked in regard to the condition of the automobile industry at the present time, and answered in full knowledge of existing conditions, the reply would be without qualification, "Good." It is a general principle based on sound reasoning, that the bulk of business favor inclines to the firms which make the most consistent and forceful effort to secure and retain it, just as the compass needle points to the strongest pole in its field regardless of the number of other poles which may influence its position.

Those makers who have been building cars with the clear idea in view of catering to a certain class of customers; who started in with ample resources and skill at their command and have adhered to first principles with fidelity and concentration of their energies; those who have built their cars thoroughly and well; are the shining lights in the field to-day who are more or less subject to the envy of their less successful competitors. They are the established and reputable makers who even in times which otherwise may be reckoned as comparatively dull are reaping the harvest which their far-sighted policy has merited.

This in itself constitutes a reply to the shallow reasoners who decry from time to time the "runs" on various popular brands of car, and even hint at the eccentricities of popular favor. Quite to the contrary, the popularity of any given machine extending over from season to season must be taken as an indication that it is coming into a position on the market which it truly deserves; that its makers are receiving a just reward for their efforts. At no time is the effect of such popularity more evident than during and immediately after a period of business depression. It requires a crisis to emphasize to the men in the trade the facts which have been patent to outsiders—to develop the prestige of real worth.

In the broadest possible sense, people have been buying automobiles hitherto. Now it has become necessary to sell them. The demands upon salesmanship are greater than ever before, the "selling points" of the products have taken on new importance, the real worth of the car in distinction from its superficial attractions has become paramount. All this means a reorganization of selling methods, an overhauling of selling forces and the dolorous elimination of many petty men in pretty clothes whose actual value to the industry has been discovered in connection with the overturning of the former systems of administration.

Such changes are continually taking place—some with visible result, some more subtly. Certain firms are finding the market constantly improving, while others experience conditions which are just the reverse. It is a process of gravitation, permitted to take place now that the turmoil of the formative period of the industry has in a measure subsided. The results of real business ability and faithfulness to a wisely chosen policy are beginning to be distinctly manifest, and where this is the case, it is found to be true that business is indeed very good.

Prices and Reasons Therefor.

It always is difficult to reconcile a certain class of buyers to the high prices asked for the certain grades of goods. In the automobile industry this is particularly true with regard to the cost of some of the more expensive cars. But though the layman may not be able to appreciate it, there is a legitimate difference in cost between cars which are apparently alike in design and construction, which is easily accounted for by expenses due to the administration of the plant where they are produced, and is fully justified in the performance of the vehicle.

Thoroughgoing inspection of every part, extending not simply to the independent components, but repeated after they are assembled, constitutes an element of expense which is by no means inconsiderable in comparison with the total cost of producing the car, and which also more than pays for itself in the long run. The use

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of high grade materials taken, not upon trust, as it were, but upon the expert recommendation of specialists in the employ of the maker constitutes another item of producing cost, not apparent in the product. The maintenance of chemical and physical laboratories for the purpose of qualifying every item of stock used in the car is no mean factor in building the high price of a first-class car, nor in contributing to the value which that price ensures.

Again, the treatment of these high grade materials by high grade processes demands a big plant and skilled operatives. Systems must be worked out, provision made for attending to every little detail in a thorough and practical manner. Systems ensure successful results, but they are expensive. It costs a good deal just to run the establishment which is equipped to turn out really excellent cars in significant numbers.

These various items are entirely in excess of the costs involved in producing cars along less conscientious and restricted lines. They multiply with great rapidity and mount up to an astonishing degree. That this addition to what might be called the basic cost of a car of certain stated specifications is a legitimate addition—that it is repaid in lower depreciation, increased serviceability and reduced cost of maintenance, is proved in a goodly number of concrete examples of such first class productions as have rescued the name of the American manufacturer from the reputation of shoddy workmanship which it used to hold among motor car builders and owners the world over.

High selling cost is not in itself a criterion of merit in motor cars any more than it is in furniture or clothing or tinned meat. The purchaser in order to invest wisely must exercise a certain amount of discrimination founded on the nature of the machine and its reputation. But he must be made to understand that there is a proper reason for the high price asked for really high grade cars.

The Anti-American Program.

The action of the disgruntled Automobile Club of America, of New York City, in deciding to conduct a race for foreign cars on American soil in opposition to the Vanderbilt cup contest immensely simplifies the situation.

It will range on one side all those who are of America and for America and American institutions, and on the other side all those who are against them.

The more-than-ever misnamed Automobile Club of America, so long dominated by an alleged American who is, or tries to be, Frenchier even than a Frenchman, is but proving true to its previous inclinations. It stands as the best friend the foreigners and foreign manufacturers ever possessed on this side of the water. It is no wonder that the foreign organizations have fallen over themselves in making haste to applaud the stand of the A. C. A. Not to do so would be to be guilty of the blackest ingratitude. Next to the Automobile Club of America, the "lovliest" specimen of American sportsmanship is disclosed in the Savannah Automobile Club, which wants a race so badly that it will turn any sort of a flip-flop, or carry water on either shoulder, or train in any old company in order to obtain it. If the Automobile Club of America's Hessian race on Georgia soil proves as successful, financially and otherwise, as the foreign shows that were held in New York, the Savannah club will reap its just reward.

With the issue so dearly defined and the line so sharply drawn, the American sportsman or American manufacturer who lends countenance to the A. C. A.'s mischief-making program deserves to be viewed askant. He is either hard pressed to obtain undesirable glory or doubtful publicity. It is perfectly plain that all who compete in the A. C. A. contests thereby will become "outlaws" of sport. The number of such "outlaw" movements which have succeeded can be numbered on the fingers of one hand without counting the thumb, and if the support of even the bemillioned head of the steel trust, prompted by men with grievances and bolstered by salaried employes who must needs find work to do, can establish the A. C. A. brand of outlawry, it will be strange indeed. When such movements peter out, usually, the only men who suffer are the misguided dupes who merely serve as the chess-pieces for the disgruntled chieftains. So far as concerns automobile sport, there are so many poor devils who are not their own masters, and who must needs compete when ordered to compete, or lose their jobs, that the A. C. A. breed of outlaw will be more pitiable than usual. The head of the steel trust might at least start a pension fund for the poor fellows who "don't know where they're going, but who are surely on the way"—to have the brand of spurious sportsmanship placed on their backs.

The spectacle of a big club, officered by grown men, so plainly acting first the part of a small boy who "won't play," and then the part of dog in the manger, is a spectacle not often afforded.

COMING EVENTS

June 4, Trenton, N. J.—Mercer County Automobile Trade Association's 200 miles sealed bonnet reliability run.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 6, Worcester, Mass.—Worcester Automobile Club's annual climb up Dead Horse hill.

June 9, New York City—Orphan's Day Automobile Committee of New York's annual parade of orphans.

June 13, Cleveland, Ohio—Cleveland Automobile Club's annual hill climb.

June 13, Philadelphia, Pa.—Quaker City Motor Club's race meet at Point Breeze track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrimac boulevard.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

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EXCITING SPURTS UP SPORT HILL

Poole Breaks Records at Bridgeport's Annual Climb—Coffey's Daring Drive—Thrills for 10,000 Spectators.

Breaking all records for the course "Al" Poole, who first became known as the mechanic of Joseph Tracy, and who later was given a wheel position on a foreign car, won the Board of Trade cup and scored the fastest time of the day in the third annual hill climbing contest promoted by the Automobile Club of Bridgeport, held on Sport hill, Easton, Conn., last Saturday, 30th inst. Poole covered the mile of stiff grade, studded with treacherous hills, in 1 minute 17 seconds, lowering by 7⅗ seconds the record made over the same course last year by Tracy. Without taking any credit from Poole it can be said that John J. Coffey, of Hartford, earned just as much glory and received just as many cheers when he piloted his Columbia car across the finish line in 1:19⅘. Coffey's splendid driving and the reckless abandon with which he slewed around the curves were bright features of an unusually well-managed and exciting hill climb.

To begin with there were something like 10,000 people out to see the cars scramble uphill, and despite the immense human outpouring there was not the slightest trouble in keeping the course clear for the racing machines. Due to the business-like methods employed by the Fourteenth company of the Coast Artillery, which patrolled the course, this part of the program left nothing to be desired. The crowd seemed to respect the uniformed soldiers with their rifles and usually a request was sufficient. The politeness of the guardsmen was a sharp contrast to the irritating officiousness that marked the late Briarcliff race.

The third annual was the most successful of the Sport hill climbs, and the Bridgeport Club deserves more credit than usually is given to promoting organizations, for the admirable manner in which all the minutest details were attended to. Referee A. L. Riker was about the busiest man at the course and—his face was clean. Not that this is an unusual thing with Mr. Riker, but the Locomobile's designer had spent several days on the course superintending the oiling of it, and as many times he had to jump in and assist in the work, by Friday night his face looked as if he had driven through a cup race over oiled roads. After the finish of the meet on Saturday Riker was noticed loading a big car with camp chairs like any $2 a day truckman. The only man that didn't overwork on Saturday was good-looking Ralph M. Sperry, chairman of the contest committee. Sperry was snugly entrenched on the bank near the "S" turn. It may have been the fact that he wasn't alone that caused him



1. VIEW OF THE COURSE AT SPORT HILL 2. VARIED ASSEMBLAGE OF VEHICLES 3. SCENE AT THE FINISH

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to look so happy, for it is a fact that he was entirely oblivious to the passing of the sputtering record-breakers, but as Sperry had worked early and late on the preliminaries he was entitled to a day off.

An effort was made to separate the spectators from their loose change by charging $1 for grandstand seats at the finish, but when the events were half over and the price had come down to 25 cents there still were no takers. One man who had a parking space below the starting point didn't catch a victim either. The only people that made money parking cars were those who rented space for the benefit of the painting fund of the Easton Methodist church. Judging from the sale of $2 spaces the church will get two or three coats of protection against the elements.

The crowds began to assemble at the course from the first peep of dawn and although the fog-blanketed hills gave rise to dubious forebodings there were at least 10,000 people at the course when the first event was started at 8:30 o'clock, and from then until noon there were no tiresome waits. While of course, there were crowds at both the starting and finishing points the largest collection of spectators was massed at the double "s" curve half way up the incline. This was the danger point, but as is usually the case when accidents are looked for, they characteristically refused to happen. Of the many spectators who reached the course in their own conveyances, not all came in motor vehicles. There were many horse drivers present and they lined up with their teams at various points of vantage.

It was just 8.30 when the starter gave the word to W. Pollard, Maxwell, in the first event, for cars selling at $850 and under. Pollard climbed the hill in 2:05⅗, and Frank Dunnell, Ford, who followed, was timed in 2:33. The Maxwell was protested but later it was withdrawn. These were the only two starters and in the event which followed, for cars listing between $851 and $1,250, there were the same number, the event going to Brockwell, who drove an Overland to the finish line in 1.43⅕. Robert Burman, Jackson, won in the class for cars listing between $1,250 and $2,000. C. B. Tiley, in a car of his own construction, had a walkover in the $2,001 to $3,000 class.

The first excitement came in the runabout class from $2,001 to $3,000. Up to that time the drivers had been exercising great care, particularly on the double "S" curve, but when Harry Tuttle cut loose and covered the distance in 1:29, the succeeding drivers took heart and let their cars out all the way. The excitement began to increase in the class for cars selling at $4,001 and over, which was for the H. D. Miller cup, and when Poole scurried up the incline in 1:20 the crowd cheered him. This was the fastest time in the event, and the best performance up to that time. Poole's Italian car was protested, however, the claim being made that it is not a stock car and the cup is held up pending a comparison of the catalogue specifications with those found by the contest committee. If Poole is ruled out the cup will go to C. F. Alcott, Stearns, who made the next best time of 1:23.

Young Kenneth McNeil, a son of Senator McNeil, got a big hand when he started in the amateur class for the Craufurd cup. McNeil handled his car like a veteran and captured the cup easily in 1:20⅗. J. Doig in the same kind of a car was second in 1:22.

Naturally the most interest centered in the free-for-all, in which several big cars had been entered, including the winner of the Briarcliff cup race. It failed to show well, however, making the next to the slowest time in a field of nine starters. Eltridge, the driver, said a cracked admission pipe slowed his time considerably. The event went to Poole, who covered the uphill mile in 1:17. However sensational Poole's run was, Coffey's was even more so. Coffey drove a light Columbia, stripped "to the waist," and its lightness caused the spectators some uneasiness on the whirlwind run. At the first turn just beyond the start were gathered some 200 spectators and most of them had crowded up to the guard rail. The stripped Columbia skidded badly at this point and there was a rush away from the spot, until Coffey had passed in safety. At the double "S" turn Coffey gave the crowd another scare, but he continued without slowing down and as a result finished only 2⅘ seconds slower than the imported winner of twice the horsepower. William Watson, in the Briarcliff Simplex, was third in 1:20⅗, and popular Harry Tuttle, Stoddard-Dayton, finished fourth, his time being 1:21⅗. The summary:

Cars $850 and Under.

W. Pollard, Maxwell	2:05⅗
Frank Dunnell, Ford	2:33

For Cars $851 to $1,250.

Brockwell, Overland	1:43⅕
Browker, Reo	2:13⅗

Cars $1,251 to $2,000.

R. Burman, Jackson	1:39⅘
Brockwell, Overland	1:46
K. R. Manville, Palmer-Singer	1:51
A. L. Kull, Aerocar	1:57⅘

Gasolene Touring Cars, $2,001 to $3,000.

C. B. Tiley, Tiley	1:54⅗

Runabouts, $2,001 to $3,000.

Harry Tuttle, Stoddard-Dayton	1:29
Dunnell, Knox	1:32
J. W. Swan, Corbin	1:51⅗
G. A. Jenkins, Pope-Hartford	2:15

Cars $3,001 to $4,000.

Tuttle, Stoddard-Dayton	1:36⅘

$4,001 and Over, H. D. Miller Cup

Al Poole, Isotta	1:20
C. F. Alcott, Stearns	1:23
Arthur Warren, Stearns	1:25
L. M. Travis, Stearns	1:26⅕
Tuttle, Stoddard-Dayton	1:29
Russell Lord, Peerless	1:33⅕
C. E. Bedford, Stearns	1:37⅗
W. Shaw, Peerless	1:40⅗

Craufurd Cup for Amateur Drivers.

Kenneth McNeil, Stearns	1:20⅗
J. Doig, Stearns	1:22
Tuttle, Stoddard-Dayton	1:22⅗
H. Swain, Stearns	1:23⅕
Alcott, Stearns	1:25
N. W. Bishop, Simplex	1:26⅘
J. S. Joyce, Locomobile	1:27⅗
R. Lord, Peerless	1:30⅕
Bedford, Stearns	1:36⅘
C. A. F. Phizenmaier, Locomobile	2:37⅕

Free-for-All, Bridgeport Board of Trade Cup.

Al Poole, Isotta	1:17
J. J. Corey, Columbia	1:19⅘
Wm. Watson, Simplex	1:20⅗
Harry Tuttle, Stoddard-Dayton	1:21⅗
Alcott, Stearns	1:22⅗
Warren, Stearns	1:22⅘
Shortsleeve, Locomobile	1:25
Clam Eltridge, Isotta	1:32⅘
Burman, Jackson	1:36⅘

Endurance Run to Benefit Orphans.

At a meeting last week of the Automobile Club of Hartford, Conn., it was decided to use the funds accruing from the endurance run for the purpose of giving an automobile outing to the children of the Hartford Orphan Asylum and kindergarten for the blind. As the club's endurance run was never intended as an event from which to earn a profit it was thought that no better use could be made of the funds than to utilize them in this way. So on June 13th, fifty automobiles loaded with children will run to some nearby park where a picnic will bring happiness to the little ones.

Connecticut Clubs May Amalgamate.

It is possible that the New Britain (Conn.) and Hartford Automobile Clubs may amalgamate. At a recent meeting last week of the New Britain club the question of consolidation was discussed, and it was determined that if the local club should not develop greater strength it would be advisable to join with the Hartford organization under the name of the Automobile Club of Hartford County. At the meeting it was decided that unless the right man can be found to build up the club, the consolidation will be effected.

Rockville Organizes a New Club.

An automobile Club has been organized in Rockville (Conn.) The officers are: President, George E. Sykes; vice-president, William Maxwell; secretary and treasurer, Lebbens Bissell. The club probably will hold a hill climbing contest during Old Home week.

Granville Club Effects Reorganization.

The Granville (Vt.) Automobile Club was reorganized last week, electing the following officers: President, F. T. Pember; vice-president, Dr. J. H. Collins; secretary, E. W. Wyman; treasurer, H. Van Derwater; corresponding secretary, Mrs. Charles Mosier.

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"GOING SOME" UP GIANT'S DESPAIR

Wilkes-Barre Hill Climb Marked by Thrilling Contests and Broken Records—Haupt's Marvelous Time.

Despite moist leaden skies and a shower which fell after the sport had commenced, a monster crowd numbering about 40,000 witnessed the annual hill-climb up Wilkes-Barre Mountain, sometimes known as Giant's Despair, on Saturday last, Decoration Day, the meet was attended with as much success as the successful event a year ago.

The meet was marked by the breaking of several records made in the last climb. William Haupt, a Philadelphia young man who piloted a six-cylinder Quaker-made car was the hero of the day. He won the free-for-all and then in a special time trial covered the 6,000 feet of winding mountain road where the grade at one place is 23 per cent., in the marvelously fast time of 1:38⅗. This is at the rate of more than 41 miles an hour. The best previous time, 1:49⅘, for an automobile was made last year by Walter C. White, while the record for the course stood at 1:40, made by a monster 14 horsepower motor bicycle. When it is considered that the course rises 690 feet in a mile, that it has a grade of from 10 to 23 per cent., and that it is a continuation of zig-zaggy double "s" curves from start to finish, it will be seen that 1:38⅗ is "going some," and following this line of reasoning it is not surprising that the Wilkes-Barre miners could not suppress a cheer when Haupt skidded around the oiled curves on two wheels.

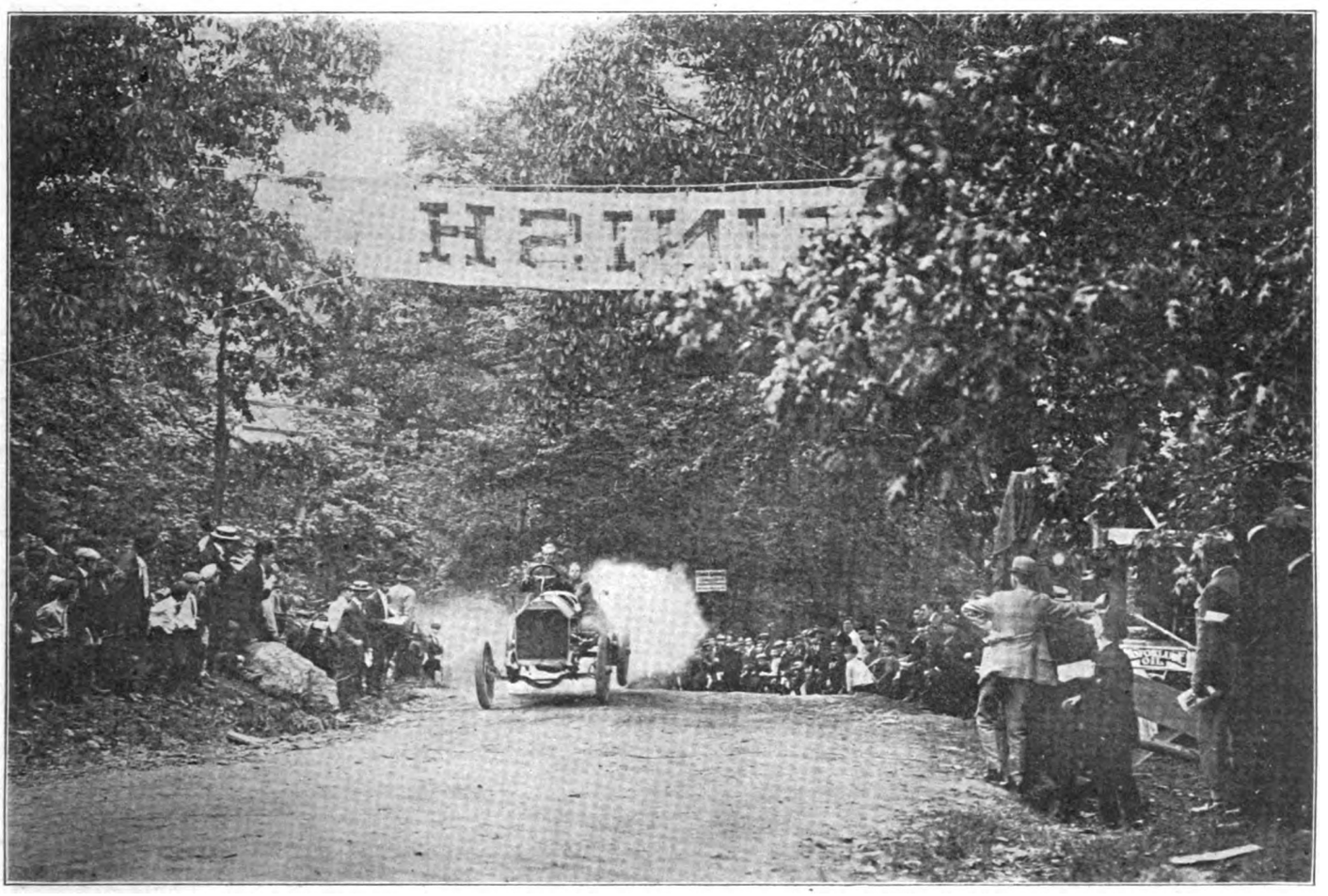
The meet was filled with thrills, but fortunately there were no serious accidents to the cars and no person was injured among the drivers or spectators. The course was in excellent condition.

A. A. Jones, in a Ford, started the ball rolling in the event for gasolene cars under $850, and he reached the summit, Prospect Rock, in 3:19⅗. After Jones had made his climb a crowd of about a thousand persons poured onto the road from an excursion train and delayed proceedings for a while. Charles Fleming, Maxwell, then made the run in 3:22⅗.

The fun began after Jones had trimmed Fleming, and R. Jackson enjoyed a walk-over in the second event. With the calling of the third event the announcement was made that the Corbin had been scratched, and when Berger stalled his Oldsmobile at the Devil's Elbow turn there were only two left in the event. These were Bitner's Rambler and Lengle's Acme. The latter won easily, but was protested, the claim being made that the Acme had no stock catalogued at less than $3,000, whereas this class was for cars under $2.000. Then to keep the protest ball rolling, Gilbert H. Smith protested the Pennsylvania Vanderbilt car in the event for cars between $2,001 and $3,000. The justice of the protest was admitted and the entry was withdrawn.

To add to the complications, many entrants were inclined to question the right of the referee to award medals in two classes where there was but one entrant, who was thereby assured of a walkover. Later the announcement was made that the promised first prizes would be awarded to the walkover participants.

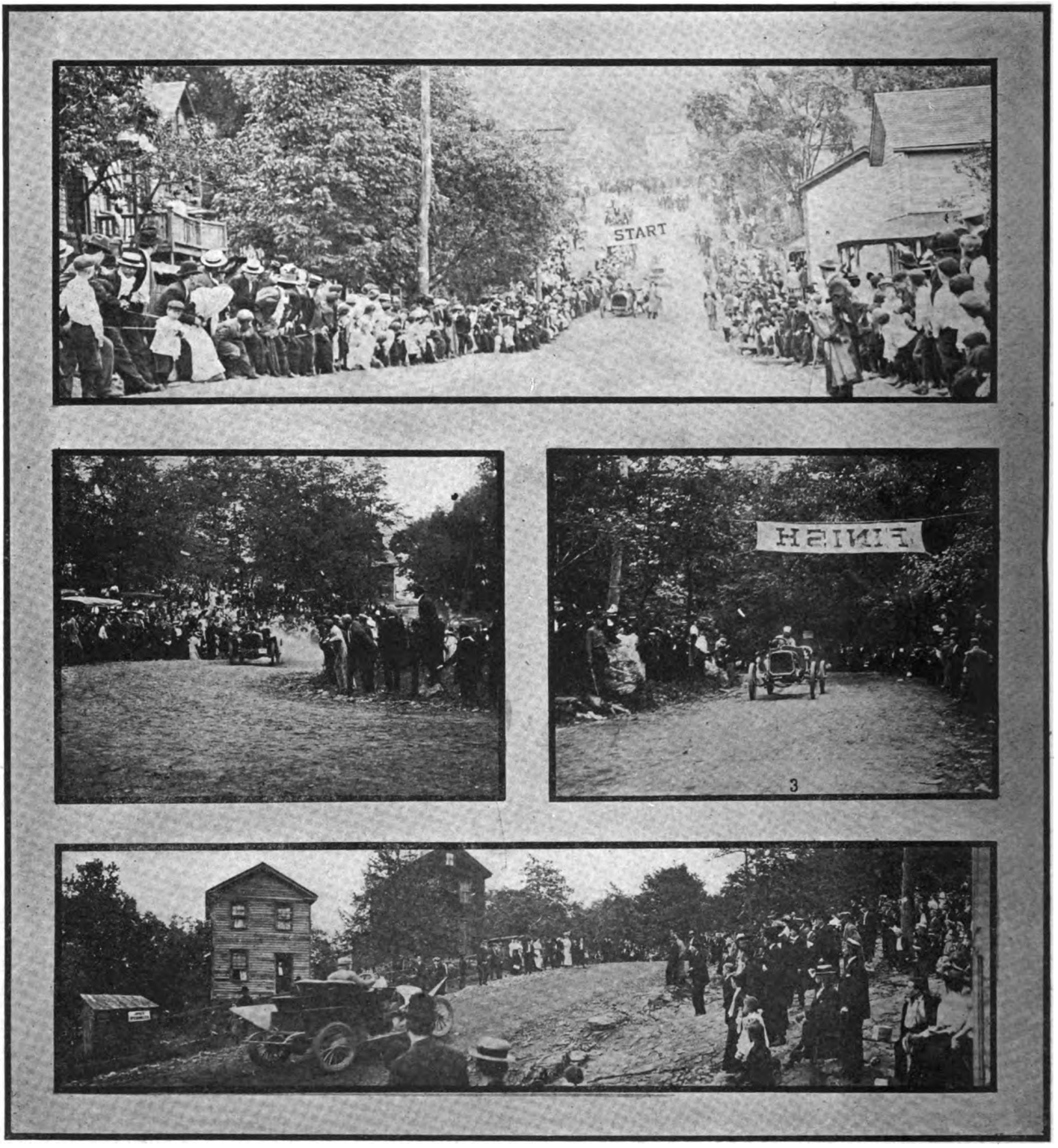
At this point it was announced that the free-for-all would be held and a mix-up was occasioned that kept the Stoddard-Dayton out of the open event for cars between $2,001 and $3,000. The driver was informed that the event was to be postponed and so he left the course. When Referee Morrell changed his mind suddenly, as he frequently has been known to do, and ordered the events to be run according to schedule there were only two starters ready for the event, a Thomas-Detroit and a Corbin. It went



WILLIAM HAUPT (CHADWICK) LITERALLY BOUNDING TO VICTORY—REAR WHEELS IN THE AIR

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SCENES IN THE WILKES-BARRE HILL CLIMB.



1. THE STIFF GRADE AT THE STARTING POINT
2. DEVIL'S ELBOW. ONE OF THE ZIG-ZAG TURNS
3. JOHN DOWNER (CORBIN) IN A WINNING FINISH
4. WHIRLING AROUND A SHORT CURVE

to the former in 2:19⅕. The next event was a walkover for S. H. Hancock; and C. A. Ward, Matheson, got a medal just after in the same manner.

Interest began to increase in the event for six-cylinder cars when Hancock ran his Stevens-Duryea up the hill in 2:08⅕, and Haupt followed in 1:57⅗. Here was a real contest at last, and it proved to be when Robinson in the big Stevens romped up in 1:52, the fastest time up to that point, breaking the record for gasolene cars made last year. The free-for-all brought out two or three big cars and Haupt in his Great Chadwick, ran away with the race in 1:41⅗. Just as much interest centered in the race for cars of the Briarcliff type and this was one of the closest contests of the day, John Downer, in a Corbin, winning a popular victory when he defeated Hoffman in a Stearns, by 2⅕ seconds.

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Haupt made his sensational run in the time trials when he covered the distance of more than a mile in 1:37⅗. C. A. Ward, in a Matheson "Big Six" set out to put Haupt's performance in the shade, but a flat tire caused him to ditch near the Devil's Elbow. The various sections for the Quaker City drivers were won by Marriott, Stanley; Longstreth, Maxwell, and Zengle, Pennsylvania. The summaries:

Gasolene Cars Not Over $2,000.

1 E. Lengle, Acme 2:45⅗
2 A. H. Bitner, Rambler 4:08⅕
3 Tom Berger, Oldsmobile ...did not finish

Gasolene Cars Not Over $3,000.

1 P. W. Miller, Stoddard-Dayton... 2:14⅗
2 O. Light, Thomas-Detroit 2:18
3 John Downer, Corbin 2:24
4 Tom Berger, Oldsmobile..... 2:30⅗
5 Leonard Zengle, Pennsylvania... 3:29⅕

Gasoline Cars, $2,001 to $3,000.

1 O. Light, Thomas-Detroit 2:19⅕
2 John Downer, Corbin 2:45⅕

Gasolene Cars Not Over $4,000.

1 S. H. Hancock, Stevens-Duryea .. 2:17

Gasolene Cars, 4-Cylinder, Not Over $4,000.

1 C. A. Ward, Matheson 3:14⅗

Gasolene Cars, 6-Cylinder, $2,500 or Over.

1 P. J. Robinson, Stevens Duryea .. 1:52
2 William Haupt, Great Chadwick.. 1:57⅗
3 S. H. Hancock, Stevens-Duryea... 2:08⅕
4 J. Deatriel, Matheson 2:38⅕

Gasolene Cars Under $850.

1 A. A. Jones, Ford 3:18⅗
2 Charles Fleming, Maxwell 3:22⅗

Gasolene Cars Not Over $1,250.

1 R. Jackson, Mitchell 4:02⅗

Free-for-All.

1 William Haupt, Great Chadwick .. 1:41⅗
2 P. J. Robinson, Stevens-Duryea... 1:49
3 Fred Marriott, Stanley 1:57⅗
4 D. Walter Harper, Stanley 1:59⅗
5 John Downer, Corbin 2:11⅕
6 O. Light, Thomas Detroit 2:15
7 C. A. Ward, Matheson 2:18⅘

Briarcliff Type Stock Chassis.

1 John Downer, Corbin 2:02⅗
2 W. Hoffman, Stearns 2:04⅕
3 S. H. Hancock, Stevens-Duryea .. 2:04⅘
4 A. Gentile, Pennsylvania 2:13
5 O. Light, Thomas-Detroit 2:14
6 L. Zengle, Pennsylvania 2:17⅕
7 C. A. Ward, Matheson 2:52

Special Time Trials.

1 William Haupt, Great Chadwick .. 1:38⅖
2 C. A. Ward, Matheson .....Ditched

Quaker City Motor Club—Steam Cars.

1 Fred Marriott, Stanley 1:56
2 D. Walter Harper, Stanley 2:01⅘

Quaker City Motor Club—Cars Costing $2,000 and Under.

1 W. C. Longstreth, Maxwell 2:49⅘
2 T. W. Berger, Oldsmobile 3:14

Quaker City Motor Club—Cars Costing Over $2,000.

1 L. Zengle, Pennsylvania 2:10⅕
2 William Haupt, Great Chadwick..Ditched

CEDRINO'S UNDERSTUDY A WINNER

Brown Makes Fastest Time in Yale Hill Climb—Swan Makes Next Best Times in Three Events.

David Bruce Brown, a young New York amateur who has been understudying the late Emmanuel Cedrino, made the fastest time in the hill climb conducted by the Yale Automobile Club at the Shingle hill, near New Haven, Conn., Wednesday of last week, 27th ult. Brown covered the mile incline in 1:06⅖, in the class for cars with cylinder capacity between 400.1 to 550 cubic inches. Cedrino who, a few days later was killed in an accident at Baltimore, rode as his mechanic and was to have driven the Fiat car in the free-for-all, but a mishap put him out of the running.

The Yale meet was one of the best ever held in New Haven; it attracted about 5,000 people to the rock-bound course. Every car was at the tape on time and after the first delay, when the spectators crowded on the course and were only cleared off when it was announced that the contest would be called off unless the road was cleared, everything proceeded without a hitch.

The first event was for cars with cylinder capacity up to 200 cubic inches and this was won easily by T. C. Walker, Ford. W. A. Burke, Knox, scored a popular victory in the class for cars with cylinder capacity between 100.1 and 400 cubic inches, when he romped up and around the three curves in the fast time of 1:12⅕. The nearest approach to this time in this event was made by H. Tuttle, Stoddard-Dayton. In the free-for-all, Burke ran a close second to W. W. Swan, whose Stearns was timed in 1:10. Burke's time was 1:11⅗. Swan won the class for big cars in 1:15⅖; J. S. Joyce, Locomobile, was second. W. A. Maynard drove a Thomas Forty to victory in the class for touring cars, fully equipped, having a cylinder capacity not greater than 550 cubic inches. J. W. Matthews, Stevens-Duryea, was second in 1:32⅕, and R. B. Stern, Fiat, got third place.

Gasolene Cars with Cylinder Capacity up to 200 Cubic Inches, Inclusive.

1 T. C. Walker, Ford 1:30⅘
2 J. Lee, Buick 1:35⅖
3 D. B. Lyman, Locomobile 1:43⅗
4 H. Tuttle, Stoddard-Dayton 1:47⅕
5 J. Lee, Buick 1:49⅖
6 J. Coddington, Ford 2:15⅖

Gasolene Cars with Cylinder Capacity from 200.1 to 400 Cubic Inches, Inclusive.

1 W. A. Burk, Knox 1:12⅕
2 H. Tuttle, Stoddard-Dayton 1:17⅖
3 W. T. Dill, Apperson 1:18⅕
4 J. W. Swan Corbin 1:20⅗
5 N. B. Whitfield Oldsmobile 1:22⅗
6 W. A. Wickshire, Stoddard-Day.. 1:23⅘
7 W. J. Morden, Berliet 1:29⅕
8 W. Barnum, Stevens-Duryea.... 1:33
9 F. S. Fellows, Thomas Forty.... 1:38⅘

Gasolene Cars with Cylinder Capacity from 400.1 to 550 Cubic Inches, Inclusive.

1 David Bruce Brown, Fiat 1:06⅘
2 W. W. Swan, Stearns 1:08⅘
3 F. B. Whittemore, Itala 1:14⅖
4 J. S. Joyce, Locomobile 1:15⅕
5 W. C. Decker, Thomas 1:15⅘
6 D. Dows, Fiat 1:16
7 Felix Prossen, Bianchi 1:16⅗
8 H. Tuttle Stoddard-Dayton 1:20
9 W. A. Wickwire, Stod-Dayton... 1:24⅖
10 F. E. Bowers, Rambler..... 1:26⅗

Gasolene Cars with Cylinder Capacity Above 550 Cubic Inches.

1 W. W. Swan, Stearns 1:07⅗
2 J. S. Joyce, Locomobile 1:15⅖
3 R. Lord, Peerless Six 1:15⅗
4 Felix Prossen, Bianchi 1:15⅗
5 F. B. Whittemore, Itala 1:15⅘
6 L. G. Hall, Stearns 1:18⅖
7 H. Tuttle, Stoddard-Dayton..... 1:23⅘

Gasolene Touring Cars Carrying Full Equipment and Having Cylinder Capacity not Exceeding 550 Cubic Inches.

1 W. A. Maynard, Thomas Forty.. 1:26⅘
2 J. W. Matthews Stevens-Duryea. 1:32⅖
3 R. B. Stern, Fiat 1:35⅕
4 W. C. Pratt, Columbia 1:36⅕

Free-for-All

1 W. W. Swan, Stearns 1:10
2 W. A. Burk, Knox 1:11⅗
3 Egbert Lillie, Itala 1:12⅘
4 J. R. Johnson, Jr., Locomobile .. 1:14
5 J. S. Joyce, Locomobile 1:16⅕
6 J. W. Swan, Corbin 1:18⅘
7 H. Tuttle, Stoddard-Dayton..... 1:19⅗

Mischievous Kids Kid Motorists.

Two New York youths whose combined years were about equal to the number necessary to arrive at the age of discretion had a lot of fun with automobilists one evening last week. They stationed themselves in the shadow of a tree on the driveway to Coney Island and whenever a car or motorcycle passed that was going even a little bit, one of the jokers blew a shrill blast on a whistle and they found their amusement in watching the effect. As the conspirators were in the dark the motorists could not see that they were being hoaxed, and fearing that they were exceeding the speed limits they immediately slowed down.

First Air Cooled Car at Brooklands.

What evidently is to be considered as something of an event, will be the first appearance on the Brooklands motordrome of the first air-cooled car to be raced on the huge course, which is to occur shortly. It goes almost without saying that the machine to receive this distinction is of American manufacture. It is a Frayer-Miller belonging to Jack Darwen, of Bromley.

Bliss at Head of Malden Club.

At its annual meeting the Malden (Mass.) Automobile Club elected the following officers: President, Alvin E. Bliss; vice-president, Willard E. Robinson; treasnrer, Albert B. Tenney; secretary, Herbert A. Gidney; board of governors, L. L. Libby, R. C. Guptill, Philip V. Mingo, John B. Robbins, W. S. Hopkins, G. E. Hanscom, J. W. Maguire.

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PIMLICO MEET A DISAPOINTMENT

Walkovers and Runaways Characterize the Events—Fence Plunging Act in 100-Miles Race the Only Thriller.

Whether it was the unfortunate accident to Cedrino the day before, or just because the events were rather uninteresting, or both, at any rate something put a damper on the meet conducted by the Motor Car Racing Association at Pimlico track, near Baltimore, on Saturday last, 30th ult. To be sure, the crowd was large, numbering about 5,000, but they did not warm to the events, most of which were uninteresting runaways. One fence-plunging act, entirely impromptu, and the excitement afforded by a good motorcycle race, were the only features to partly repay the large crowd for the money it had expended.

In the first event, for stock touring cars selling from $2,000 to $3,000, there were only two starters. One of them broke down in the first mile, leaving the other to finish the remaining four miles alone. In the second event, a so-called Maryland runabout championship, there were three starters, but one of them lost a tire in the first mile and the other fizzled discouragingly so that there was only one car going fast at the finish. In another race at five miles only one car started and, of course, this was highly interesting. In the 10 miles handicap the scratch car caught the long markers in three miles, loafed behind them for three miles more and then came through and won by a mile.

The only events resembling races were the motorcycle handicap and the 100 miles "championship" for stripped cars, but as the winner in this latter event led from start to finish and finished 19 miles ahead of the second car, it cannot be said that this race was terribly exciting. The one bit of excitement occurred in the latter minutes of the race when J. S. Price, Acme, plunged through the fence, following the bursting of the right rear tire. Lineau, the mechanic, was thrown out, but escaped with a slightly cut chin, while Price was not even unseated, bringing his car to a standstill. E. L. Leinbach finished first and Robert Morton second, third place being awarded to Price.

As usual, the motorcycle race furnished the interesting part of the program, and the event would have been closer had not the starter held "Chic" Thomas, the scratch man, considerably longer than was necessary. The result was that Matthew Gault, on a five horsepower twin Indian, rode so fast that Thomas could make but little gain on him. Gault soon left Cook, his co-marker, behind, and then started after the long markers, passing the last on the turn into the stretch of the last mile. His time was 6:31. The summaries:

Five miles for stock touring cars selling from $2,000 to $3,000—Walkover for A. L. McCormick, Oldsmobile. Time, 6:21.

Ten miles for Maryland runabout championship—Won by Robert Morton, Pullman; second, Charles B. Kirkman, Pullman. Time, 11:45⅘.

Five miles for cars from 40.1 to 60 horsepower, inclusive—Walkover for E. L. Leinbach, Stearns. Time, 5:31⅖.

Ten miles free-for-all handicap—Won by E. L. Leinbach, Stearns (scratch); second, Robert Morton, Pullman (23 seconds); A. L. McCormick, Oldsmobile (45 seconds), third. Time, 11:07.

One hundred miles championship for stripped cars—Won by E. L. Leinbach, Stearns; second, Robert Morton, Pullman; third, J. Price, Acme. Times, 2:00:47 and 2:30:47.

Five miles motorcycle handicap—Won by Matthew Gault, Indian; second, W. F. Fisher, Indian; third, Chic Thomas, Indian. Time, 6:31.

Two New Clubs in Minnesota.

In the last two weeks two new automobile clubs have been added to the roll of the Minnesota State Automobile Association and the American Automobile Association. The Brown County Automobile Club and the Kenyon Automobile Club have been organized and have affiliated with the State and the National organizations. The officers of the Brown county club are: President, Dr. O. C. Strickler; secretary and treasurer, H. G. Bingham; board of directors, Dr. E. Mueller, Henry M. Somsen, W. G. Frank, Ernest Aatternott; state director, Joseph Bobleter. The officers of the Kenyon club are: President, Dr. E. H. Marshall; vice-president, R. Leland; secretary and treasurer, Jay H. Held; board of governors, Albert Molin, Dr. A. J. Gates, E. G. Held, and N. W. Fox; state director, Arthur Bulong.

Physicians in the Oranges Form a Club.

With 40 members, the Physicians' Automobile Association of the Oranges has been organized by the medical men residing in that group of New Jersey towns embracing the Oranges. The officers chosen are: President, Dr. Edgar Calvin Seibert, of Orange; vice-president, Dr. Palmer A. Potter, of East Orange; secretary, Dr. Stephen G. Lee, of East Orange; treasurer, Dr. Arthur W. Bingham, of East Orange; governors, Dr. Thomas H. Harvey, of Orange; Dr. Mefford Runyon and Dr. Richard D. Freeman, of South Orange.

New Haven Automobilists Organize.

With Thomas G. Bennett as president, Jacob P. Goodhart vice-president, Amos F. Barnes secretary, and William H. Douglass treasurer, the New Haven Automobile Club has been formally organized. It is now a live association with a representative membership, a standard constitution and set of by-laws.

CEDRINO KILLED AT BALTIMORE

His Practice Spin on the Pimlico Oval Ends in Disaster—Collapsing Wheels Hurl Him to His Death.

Emmanuel Cedrino, one of the best known Italian drivers in America, was instantly killed at the Pimlico track, Baltimore, last Friday, 29th ult., while practising on the mile oval in preparation for the races that occurred the following day. The accident happened late in the afternoon, and Cedrino's car was the only one on the track at the time.

Cedrino wanted to try out the track before the races and it was late in the afternoon before he started on a practice spin. Then he jumped into the car while his little brother, Matteo, got into the judges' stand with a stop-watch, prepared to take the time. He had covered three miles in fast time and was just opposite the eighth post on the fourth mile, when there was a crash and the car lurched to the right, with the right front wheel smashed to pieces.

With one hand tightly clutching the steering wheel, Cedrino reached for the clutch with the other, but he was too late. The impetus was tremendous and the powerful car leaped on its way, bumping once as the other front wheel collapsed. It was all over in an instant. With the front axle digging into the hard ground the car stood up on end and turned turtle. As it came over Cedrino was catapulted forward and he landed on his head. There was a shriek from the young brother Matteo as he and the few people at the track rushed toward the tragic spot. One glance at the mangled body of the Italian driver was sufficient. At Coroner Hollyday Emich's inquest a verdict of accidental death was given.

Cedrino has been a prominent figure in racing circles since 1904, and held several track records in this country. Before coming to America he was the head chauffeur for the Queen of Italy. His first noteworthy achievement in America was at Long Branch on August 22, 1905, when he set up a track record of 53:14⅖ for 50 miles. He drove a car in the Vanderbilt cup race in the following October, but was put out of the running. At the last Florida beach meet he set up a record of 3:53:44 in the 300 miles race. He held all the track records for middleweight cars, from 1 to 15 miles, inclusive. He was generally regarded as a careful, though nervy driver. He had occasional mishaps, but never lost his nerve.

Emmanuel Cedrino was born near Turino, Italy, 29 years ago, and it is understood that his remains will be sent to the land of his birth for final interment. Cedrino was married about two years ago and leaves a widow and a young daughter.

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DENVER RACE DEVELOPS HEROISM

Matthewson Wins in Long Grind on Rugged Roads—De Gaston Endures Torture in Struggle for Victory.

E. Linn Matthewson, driving a Thomas Forty, won the big 320 miles road race near Denver, Col., on Decoration Day, 30th ult. Matthewson covered this distance over a ten lap course of rough country in 8 hours 25 minutes 38 seconds, an average of 38 miles per hour. Albert DeGaston, in a Locomobile, finished second, but his time was not taken for the last lap. G. A. Clarke, in a Great Smith car, was awarded third place, as he was the third and only remaining one still running at the finish, from a field of eight starters. Matthewson has been protested by De Gaston, it being claimed that his winning car is not a stock model, which was one of the requirements of the race, and the protest will be referred to the American Automobile Association for decision.

It is doubtful if any sporting event ever held in Colorado ever attracted a greater concourse of people than did the automobile road race on Decoration Day. While it is impossible to exactly estimate the crowd of spectators that watched the race from different vantage points around the 32 miles circuit, expert figurers agree that there were more than 40,000 people on hand.

The start and finish was at the Model road house, some miles northeast of Denver, and the course extended over an ordinary and rough country road to Barr, crossing the railroad tracks twice in that stretch. From Barr it wriggled through the K. and P. ranch and over the low and excessively muddy region to the Brighton road, where it went through the town and across the Union Pacific tracks again. From Brighton the road extended through a sand bed, nearly hub deep, on to Henderson, Hazeltine and Adams, and then back to the starting point. Despite its tortuousness Lovern in a Thomas Sixty made the fastest lap of the course, covering the rough 32 miles in 45 minutes 2 seconds. Lovern, however, was unfortunate in wrecking his car in the sixth lap.

The race started promptly at 8 a. m., eight cars being sent away at intervals of four minutes, as follows: 1, Brinker, Colburn; 2, Eubanks, Studebaker; 3, Clow, Colburn; Lovern, Thomas; 5, Matthewson, Thomas; 6, Clarke, Great Smith; 7, De Gaston, Locomobile; 8, Sanford, Thomas. Two of the original entries failed to start.

De Gaston, in the Locomobile, made the fastest run in the first lap, his time being 45:11, with Matthewson a close second in 45:30, and in point of time De Gaston led at the ending of the second lap. In the third lap, however, the exhaust pipe in some manner became loose and as the gases were escaping within the hood, De Gaston ripped the latter off. From that time until the finish of the ninth lap, plucky De Gaston had to breath the exhaust gases, and to further add to his discomfiture, the radiator became loose and permitted the hot water to splash over his face. There are very few men that would have stood this for seven hours—De Gaston was one of the few. He was in the race to win, and his pluck and nerve deserved a first, although he only got second. Alfred Longworth, his mechanic, also showed great pluck. At the finish of the long ordeal the skin on De Gaston's face hung in blisters, but the plucky young Frenchman was cheerful about it, forgetting his own injuries to praise his mechanic and to challenge Matthewson to another race.

Matthewson, the winner, drove a remarkable race and stopped only long enough to change tires. He started sixteen minutes behind the first car, but passed it in the first lap and from then until the finish kept the nose of his car in front. Matthewson is an experienced road and track driver and is expected to pilot one of the Thomas cars in the next Vanderbilt cup race. His mechanic was Harry A. Ball, only 19 years of age, but who rode like a veteran, and materially assisted Matthewson to win a great race. Several times when they struck the mud holes and water puddles Bell would take his coat and shield Matthewson's face to prevent the mud from flying in his face. Matthewson took a blind man's chance, but was lucky.

The Great Smith car was still in the running when the race was stopped and it was awarded third place. It had been having magneto trouble but was still gamely limping along. The others were all out, however. Brinker's Colburn was the first to drop out, as it developed leaky valves in the third lap, after covering the second in the slow time of 1:21:39. In this lap also Sanford's Thomas cracked a cylinder and was withdrawn. There were no more accidents until the sixth lap when a mile north of Barr a tire on Lovern's Thomas gave way and the car ran amuck, overturning. Lovern and James Clock, his mechanic, were both thrown from the machine but escaped with slight injuries. The car was damaged too badly to proceed.

This left five cars in the race, but two others soon were put out of the running. Eubanks was pushing the Studebaker along at a mile a minute speed to make up lost time when an overheated journal brought him to a quick stop and a lap later the other Colburn car retired with a broken axle.

Road Race and Meet at Ogden.

Although it was not advertised beforehand it seems that somebody or other had an automobile road race and track meet at Ogden, Utah, on Decoration Day. A ten mile course from the Ogden river bridge to the Utah Hot Springs was the avenue in the morning and the road race was won by Harmon Perry, who covered the distance in 13 miutes 30 seconds. L. H. Beecraft was second in 14:00, and William Eccles failed to finish. Nine drivers stared in the ruabout class over the same course and the victory went to J. C. Jensen who finished in 15:45. Horace Peery was second in 16:30, William Ure third in 17:00, Archie Browning fourth in 17:30 and N. A. Gay brought up the rear in 18:30, the others failing to finish. A. E. Hyde, of Salt Lake City, made a ten miles trial over the same course and finished in 12:25. He drove a Pope-Toledo. At the meet at the Wasatch driving park in the afternoon L. H. Beecraft won both the five and ten miles events. The times are not given.

Readville Meet Postponed to June 17.

Rain caused a postponement of the Readville meet of the Bay State Automobile Association scheduled for Decoration Day. The track had been oiled in the morning and when the shower came up in the early afternoon the oil prevented the water from soaking in. Several of the contestants drove slowly around the track but declared it unsafe for speeding so the meet was postponed until June 17th, "Bunker Hill Day," when a crowd may be expected.

SUMMARY OF THE DENVER ROAD RACE.

	Driver and Car.	Time by Laps 1	2	3	4	5	6	7	8	9	10	Total Time.
1	Matthewson, Thomas Forty	45:30	51:40	52:01	50:40	55:00	40:16	51:32	49:35	50:51	49:53	8:25:38
2	De Gaston, Locomobile	45:11	46:04	60:11	55:39	71:03	72:37	69:57	70:04	64:12	Time not taken	
3	Clarke, Great Smith	56:46	67:17	57:36	56:25	58:09	64:14	137:13	Flagged.			
	Clow, Colburn	51:08	50:03	57:45	49:55	75:42	59:15	53:52	72:03	Broken axle.		
	Eubanks, Studebaker	52:57	70:14	91:51	57:44	56:57	59:22	73.04	Overheated journal.			
	Lovern, Thomas	57:00	*45:02	45:39	45:38	97:48	Wrecked.					
	Sanford, Thomas	45:48	45:37	Cracked cylinder.								
	Brinker, Colburn	49:55	81:39	Sprung leak in valve.								

* Fastest lap.

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THROUGH 249 MILES OF MUD

Minneapolis Endurance Run Results in Only One Perfect Score—Thirteen at the Finish on Friday.

Over roads that were just a little bit better than no roads at all, 13 cars finished the two days' endurance run of the Minneapolis Automobile Club that ended on Friday night last, 29th ult. Of this unlucky number of cars in at the finish only one had a perfect score. The strenuous contest resulted in a notable victory for O. E. Martin, who drove a Thomas-Detroit through 249 miles of mud and mire with the least penalization. When the run finished the Thomas-Detroit was the only car that had a perfect score, but to make the test most conclusive of any that has yet been held, the technical committee got to work, while the gasolene expert figurers figured which car had been the most economical. Both this and the condition of the car counted in the final award, and the Thomas-Detroit came through with the highest percentage of .929, while two Ford cars, driven respectively by George Dorr and A. A. Hanson, were second and third in the final placing. So far as economy was concerned the two Great Arrow cars carried away the honors. The car driven by Paul Hoffmann had the highest percentage as regards economy, with 1,000, and his teammate, Winchester, was given a percentage of .986 in the economy award. For winning Martin receives the Tribune trophy and a gold watch.

The Minneapolis endurance run was as strenuous as any that has been held, although the distance was only 249 miles. The first day's run to St. Cloud, 151 miles, was easy for most of the drivers, as only three had bad luck. Thomas Bromwell, Oldsmobile, went into a ditch on the trip to St. Cloud and withdrew after he found that he was so late at the St. Cloud control as to prevent him making a good showing. On the return trip from St. Cloud to Minneapolis, F. H. Switzer's Moon car had considerable trouble and was withdrawn as it was so late getting in. The most serious accident happened to H. J. Clarke's Pope-Hartford. On the return trip from St. Cloud an unexpected skid sent the car over a small bridge and it landed bottom up in the water. The car finally was righted and reached Minneapolis but with a penalization of 246 points. It later was disqualified for having left the official course. The total penalizations for the first day were as follows:

E. Simpson, Rambler, road work, 25 points; W. C. Rice, Kisselkar, road work 44, seals 175, total 219; D. Sutton, Welch, road work 2; T. Bromwell, Oldsmobile, time penalty 95, road work 107, seals 50, total 1,252; F. H. Day, Oldsmobile, road work 25, seals 25, total 50; W. A. Fox, Cartercar, road work 27; John Fawkes, Overland, road work 6, seals 50, total 56; H. J. Clarke, Pope-Hartford, time pealty 246. This left ten of the original starters with perfect scores, while one car had not reported.

The second day proved the Waterloo, however. The original intention had been to run to Mankato and return but the roads were reported to be in such fearful condition that a change was made, with Northfield as the turning point and the finish in Minneapolis—a total of 98 miles for the day's run. From the moment the cars left Minneapolis the roads were nothing but seas of mud, and an interminable series of ruts reached all the way to Northfield. The cars were continually up to their axles in the sticky black loam which prevailed in the greater part of the roads. Despite this fact the trip to Northfield was uneventful and most of the cars reached there without any great penalization. The trouble came on the return trip.

With the pounding given the mud by the seventeen cars on their out trip and the warm wind blowing and getting in its drying work, the going was much better for a few miles out of Northfield. Then, just as every thing began to look lovely, a terrific thunder shower opened its batteries and within fifteen minutes the course was a worse mire than it even had been in the morning. Ruts that had been worn down to a hard and firm bottom were again flooded and softened; bad sections that had been carefully studied by the drivers were inundated and thus lost to view; rushing torrents coursed from every hillside and all the little valleys between inclines of the road were changed to lakes of mud and slime.

And then the grief began. Not heart-breaking, home-destroying grief, such as results when a man's car goes completely to the bad and refuses to give a last, dying kick, but plenty of the brand which bears all the earmarks, yet falls short of, the real article. Tire chains began to slip more frequently than before, while the low and intermediate gears were worked overtime in a heroic effort to pull the cars through the sloughs of despond. In one particularly bad place in the road where all the rivulets and streams converged to turn the course into what looked like an impassable slough, the Cartercar became mired. Luckily the Mason came along and pluckily pulled it out at the imminent danger of becoming stuck itself. The Cartercar had a bad axle however and was left in a barn over night. A few minutes later the Welch sank in the same spot. And then the Pope-Hartford got it, too.

To make a long story short, there were only three cars that got back to Minneapolis with a penalization under 50 points. These were the Thomas-Detroit and the two Fords. Martin was the only driver that did not lose a point on either day, and the superb way he handled his Thomas-Detroit was the occasion for general comment and praise. His was a brilliant victory in spite of the adverse circumstances and he has reason to be proud of the handsome trophy and the gold watch which were his portion. Equally meritorious were the performances of Gus Hanson and George Dorr, who drove the two Fords, the smallest cars in the test. Hanson had tire trouble which caused him to lose two points, while Dorr lost but 25 points on the two days' run. According to the findings of the technical committee in their final examination the Franklin, driven by H. H. Mich, was in the best mechanical condition, and it was assessed only one point, but as it had lost 52 in road penalties on the second day that gave it a total which put it in fourth place.

SUMMARY OF THE MINNEAPOLIS ENDURANCE RUN.

Driver.	Name of Car.	Economy		Total.	Road Penalties. 1st day.	2d day.	Technical.	Ptcg.
O. E. Martin	Thomas-Detroit	484	495	979	—0	0	50	.929
George Dorr	Ford	476	465	941	—0	25	12	.904
A. A. Hanson	Ford	468	435	903	—0	2	7	.901
H. H. Mich	Franklin	472	480	952	—0	52	1	.899
Paul Hoffman	Great Arrow	500	500	1000	—0	97	20	.883
J. Winchester	Great Arrow	491	495	986	—0	53	50	.883
Fred Harn	Mason	473	475	948	—0	134	10	.804
F. H. Day	Oldsmobile	465	495	960	—50	118	12	.780
J. H. Prior	Stoddard-Dayton	477	425	902	—0	86	40	.776
B. E. Fawkes	Overland	465	420	855	—56	108	10	.711
D. Sutton	Welch	489	450	937	—2	322	50	.565
A. E. Kelley	Stoddard-Dayton	472	355	827	—0	203	83	.541
W. C. Rice	Kissel Kar	476	120	596	—215	1070	55	—340

E. Simpson, Rambler, withdrawn, disabled. W. A. Fox, Cartercar, withdrawn, ditched. T. Bromwell, Oldsmobile, withdrawn, ditched. F. W. Switzer, Moon, withdrawn, disabled. Charles V. Cooney, Thomas-Detroit, disqualified for leaving official course. H. J. Clarke, Pope-Hartford, disqualified for leaving official course.

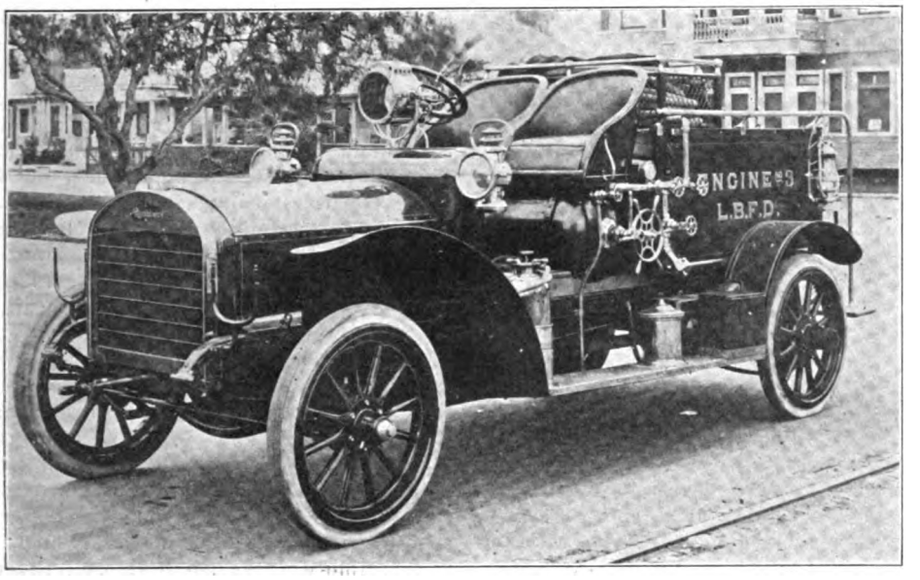
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TO FIGHT FIRES AT LONG BEACH

First Automobile Apparatus in Far West Carries Chemical Outfit and Full Complement of Men.

The first automobile fire fighter ever seen in the far West has lately been installed at Long Beach, Cal. The machine is a Rambler, designed by F. S. Craig, chairman of the Board of Public Works at Long Beach, and built by Thomas B. Jeffery & Co. at their Kenosha factory.

Many tests to determine the relative merits of horse-drawn and gasoline driven



FIRST AUTOMOBILE FIRE FIGHTER IN THE FAR WEST

fire apparatus were made before this car was selected.

The motor is of the four-cylinder vertical type, the wheel base is 120 inches, the regular 1908 Rambler tire equipment is used and the car is guaranteed to operate under a weight of 3,000 pounds at a speed of at least 35 miles an hour. Side chain drive is used, with three forward speeds and reverse. The chemical tanks are double 80-gallon receptacles and are placed under the forward seats. The rear portion of the car is used to carry 250 feet of hose. The coil of chemical hose is just back of the seats. Hand fire extinguishers are carried on the running board. Five men can be carried.

A special starting device has been provided in the form of an inclined platform so that when the alarm is received the platform is tipped and the car glides out of the station without one second's delay.

Combination Assemblage in Custom Car.

In the latest project of a Warwickshire maker the logical outcome of extended parts production is manifest. He proposes manufacturing cars to order and to specification, purchasing all the components from specialists, and building to suit the individual tastes of prospective owners. His first production in this line is termed a combination vehicle, not from any specific property which it possesses, but because of its very catholic origin. It is propelled by a 17 horsepower motor of well known make, is of generally standard construction, and is mounted on 114-inch wheel base. Outwardly it bears a close resemblance to the typical American roadster runabout.

Pierce Luxuriousness in Book Form.

Of all de luxe productions of the printer's art as applied to automobile literature, none ever has been more impressively magnificent than "The Factory Behind the Great Arrow Car," which just has been issued by the George N. Pierce Co., Buffalo, N. Y. Primarily it is a description of the mammoth new plant, in which the Great Arrow is built. But it is much more than that. In describing the factory, the author, who is John Ford, also has described, by the aid of strong words, and glorious and well chosen pictures, the making of the car itself. The book is quarto in shape, and bound in boards with a quiet but impressive cover design in greens and gold. Heavy surfaced paper is used, and the 70-odd pages of contents are filled with vivid word sketches and illustrations, set off in neat gold decorations embodying the sign of the arrow. Every department of the plant is taken up in sufficient detail to show the nature and importance of its use. The pictures show not simply the place where the work is done, but also parts of cars almost beyond number in actual process of construction. It is a high grade work, thoroughly characteristic of the Pierce people and in keeping with their product.

"The A B C of Electricity." Price 50c. The Motor World Co., 154 Nassau Street, New York City.

MOTOR VEHICLES IN MAIL SERVICE

France Adopts New Postal System Developed Through Recent Experiments—Its Economical Features.

Experiments looking toward the permanent use of the motor vehicle in the handling of the mails which, as applied in Paris, resulted in the adoption of a number of gasolene machines, of which no less than 120 are expected to be in service shortly, as told in the Motor World recently, have also been carried out in other portions of France with equally successful results. A series of trials made at Lorris in the department of Loiret, not long since, were particularly successful, and have opened up possibilities in this conection which are entrely novel.

The system which has been worked out in this connection is one of distribution in the way of feeding rural or semi-rural routes which otherwise must have been poorly served because of the long distances the carriers were forced to travel in reaching the main distributing points. By localizing the work of the carriers in this way, and shortening up their routes, they were enabled to increase the number of deliveries per day, while the mails collected were invariably delivered at the center of distribution in sufficient time to meet the schedules over the trunk lines.

The test during which this plan was tried extended over a period of two weeks, from January 15th to 30th, last, and employed a closed touring car furnished by the De Dion Co. Of the conditions undertaken and the results secured, the Scientific American says:

The post office at Lorris has eleven postmen, who are obliged to deliver mail in the city and in the surrounding suburbs of Moutereau, Cour-Marigny, Chailly, Coudray, Chataenay, Noyers, Vielle-Maisons, and Grignon. Despite the fact that the postmen are supplied with bicycles, it is nevertheless difficult to give good service on account of the large amount of mail. As a consequence, most of the suburbs have only one delivery a day.

"The experiment was carried out in the following manner: Five of the postmen were located permanently in the suburbs of Moutereau, Cour-Marigny, Chailly, Coudray, and Chataenay. Each morning the automobile started at 7 o'clock and made the rounds of these suburbs, delivering to the various postmen their mail pouches. Upon receipt of the pouches, the postmen immediately began delivering the mail. The automobile also collected from the postmen the pouches filled at Lorris at 9.15 a. m., in time for the mail leaving at that hour for Montargis, a place some 13 miles distant, to which the mail is conveyed by a horse-drawn omnibus.

"The experiment proved that by using

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an automobile in this manner, the services of several postmen could be dispensed with, and that two deliveries and collections per day could be readily made, the first delivery being a half hour earlier than before. This method of delivering mail makes it necessary for the postman to be on hand when the automobile arrives, and thus puts a check upon him. During the 15 days of the test, although the train was always late in arriving at Lorris, the automobile finished every trip on time."

America Importing Fewer Foreign Cars.

Foreign cars imported to the United States during the month of April last exhibited a falling off of some 33 per cent., both in number and value over the corresponding returns for last year. The 58 cars imported this year were valued at $148,603 as compared with $277,052, the value of the 89 cars brought over during April, 1907. France, though the largest contributor, with its 30 cars, in comparison to 70 imported last year, also was the greatest loser of American trade. Italy, on the contrary, doubled its exportation to America, sending just 20 cars. Germany gained by one car, sending 4 in all, while England's contribution consisted of 3 cars, as against 4 one year ago. The total valuation of components imported was $38,365, in contradistinction to the $66,957 aggregate of 1907.

B. & S. Apply the A. L. A. M. Standard.

The Billings & Spencer Co., Hartford, Conn., has been quick to turn to advantage the A. L. A. M. standard for rod and yoke ends. Their products conforming to the standard already are available. They are drop forged, of course, and are made strictly in accordance with the A. L. A. M. specifications both as to quality of material and design. Their design is such as will permit of the greatest possible radius of action, maximum strength with minimum weight. They are furnished either in blanks, milled or assembled. The shanks are swelled at the ends to facilitate hand welding. The adjustable yoke ends also are to be had in blanks or milled and threaded.

Temporary Cleaning of the Muffler.

Although it is necessary to remove the muffler from the car and take it entirely apart in order to clean it thoroughly, it is possible to effect a very satisfactory temporary clearing of its choked passages by tapping it lightly all over with a hammer. The result is that a considerable portion of the sooty accumulation within it is knocked off the walls and is blown out through the exhaust pipe.

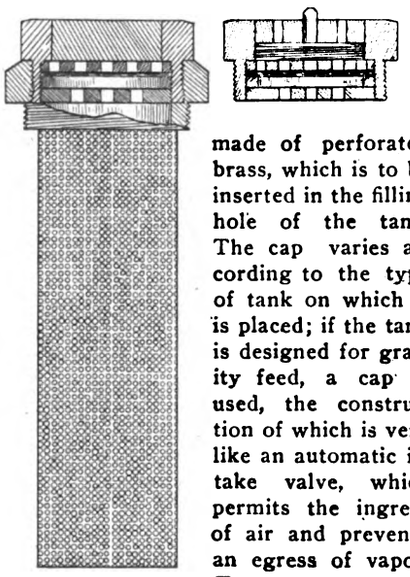
The Hartford (Conn.) Automobile Dealers' Association are taking steps toward standardizing the price of supplies. Amongst other articles which are to be sold at a uniform rate is gasolene, for which it is proposed to fix a price of 20 cents a gallon for tourists.

SAFETY DEVICE WINS GOLD MEDAL

Anti-Explosion Attachment for the Gasolene Tank—Sensational Experiments in a Convincing Demonstration.

For being the "most meritorious invention for safeguarding motor vehicles," a gold medal last week was awarded by the American Museum of Safety Devices and Industrial Hygiene to the invention of William H. McNutt, for a device designed to prevent the explosion of gasolene and one which holds great interest for automobilists.

As shown in the illustration, the device, which is a combined cap and filler tube, consists of nothing more or less than a screen



made of perforated brass, which is to be inserted in the filling hole of the tank. The cap varies according to the type of tank on which it is placed; if the tank is designed for gravity feed, a cap is used, the construction of which is very like an automatic intake valve, which permits the ingress of air and prevents an egress of vapor. For pressure tanks the valve principle is eliminated and the cap is solid. A feature of the caps, which is indispensible to the carrying out of the provisions for safety, is a fusible core, which as it is the weakest point in the tank, will blow out under an abnormal pressure; such a pressure as may be developed by the generation of gas due to the tank becoming over-heated. Each cap contains a perforated screen, and even when the gas from the tank is being emitted, a lighted match may be applied to the opening without causing either an explosion, or the ignition of the contents of the tank.

In a demonstration of the device made for a Motor World man, a metal covered table about five feet by four, was used. On the table were a half dozen cans of various sizes, each fitted with the perforated tube. The cans contained different quantities of gasolene, some were full, some half full, others had but little of the liquid, and one was empty, save for the few drops which may have remained from a previous demonstration. Gasolene was freely sprinkled over the table and a lighted match applied to it. The cans stood in the midst of the flames, uncorked. One can, which contained perhaps a half pint of the fluid, was tipped over; the gasolene ignited as it flowed out of the filler hole of the can, but no explosion occurred.

A can that was half filled was picked up and a portion of its contents poured into another can; the stream of gasolene ignited as it went from the one receptacle to another, but the flame stopped at the spout of the can from which the gasolene was being poured, and at the filler hole of the other. The gasolene entered the latter, but the flame could not pass through the perforated tube.

The demonstration was absolutely convincing. When once a can is equipped with the device there is nothing to fear from even the act of the servant who attempts to facilitate the morning fire by pouring oil from the kerosene can. The filler tube and cap are made in various sizes, and readily can be applied to any receptacle designed to contain liquids. In the demonstration small "priming cans" equipped with the device were occasionally used.

While the invention only recently has been placed on the market, it was patented in July of last year. Its suitability to the purpose is evidenced not simply by the fact of the award of the medal, but by the fact that it was recommended by the board of fire underwriters of New York after a series of exhaustive tests made more than a year ago. The whole value of the invention may be summed up by stating that neither heat or fire can cause an explosion of gasolene contained in a tank or receptacle fitted with this device, which is manufactured by the Non-Explosive Safety Naphtha Container Co., of New York.

Another of McNutt's inventions, which this company is making, is a device to be attached to or incorporated in the gasolene pipe between the tank and carburetter. In case of fire or intense heat attacking the motor, the flow of gasolene is automatically shut off by the breaking of a fuse wire which controls the action of a valve.

Tar Macadam to Make Roads Dustless.

Methods of allaying dust on the highway multiply to a bewildering extent, although the practical results of the thoroughly successful system remain to be evidenced to the casual user of the road. One of the most recent systems to be devised has lately been put to practical test in London before a committee of eminent engineers and governmental representatives, and is thought to be remarkably promising. It is a tar macadam process, in which the usual tar spraying is supplemented by the distribution of a surface layer of granite chips, which is subsequently rolled into the surface. A tar macadam road made in this way is said to cost from 85 to 97 cents a square yard as against 60 cents, the local cost per square yard of ordinary macadam. The surface so produced, however, is fine and smooth, and perfectly dustless.

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OFFERS PRIZES FOR OUTLAWRY

A. C. A. Espouses Anti-American Cause and Outlines Its Spite Program—Grasping Georgians Execute a Flip-Flop.

Having started on a career of mischief making and having had its status as a purely local organization very formally and very explicitly and truthfully defined by the American Automobile Association, the aggrieved Automobile Club of America, of New York, felt called on to show its foreign correspondents, who had been "inspired" to protest against the rules for the Vanderbilt cup race, that it is possessed not only of not only the disposition, but of a few dollars, which it is willing to disburse in their interests.

The "call" was met at a special meeting of the board of governors of the club on Thursday last. Among those present were President Gary, head of the steel trust, whose interest in and familiarity with sport was so great that probably he knows less about the Vanderbilt and other rules than he knows about the price of asafoetida; Winthrop E. Scarritt, the Yankee Doodle oratorical fife and drum corps of the Orange mountains, who very properly left his Star Spangled Banner music at home, and "Bobbie" Morrell, the most convenient friend the press agents ever had, and who never stands on the shady side of any street when the sunlight of publicity is streaming. Morrell removed the bandages from his brow before entering the meeting. Dave Hennen Morris, who ought to know better than to mix with a sorehead movement, also was present. The club's chief garageman and secretary, who are carried on the club's payroll, likewise were in evidence in order to prove themselves worthy of their hire. Of course, the details of the meeting are not public property, but it was resolved to stand shoulder to shoulder with the foreign clubs which passed racing rules which bar the product of a number of American manufacturers, and to create as much of a disturbance as possible. It was decided that the surest means of attaining these ends was to defy the American Automobile Association and the National Association of Automobile Manufacturers which had agreed that three big national events each year were sufficient for all purposes. The A. A. A. having also ruled that any person engaging in an unsanctioned contest will be disqualified, the A. C. A. elected to promote four unsanctionable contests and thus raise a large crop of outlaws, and get as many people as possible into trouble. The club announced these decisions in the following resolutions:

Resolved, That the Automobile Club of America hold in the fall of 1908 a road race under the rules of the International Association of Recognized Automobile Clubs, as adopted at Ostend, July 14, 1907, and that the contest committee of the club be empowered to organize and carry out such a race.

Resolved, That the Automobile Club of America have a gold cup, to be known as "The Grand Prize of the Automobile Club of America," to be competed for annually in a road race to be conducted under the auspices of the Automobile Club of America under the rules adopted each year by the International Association of Recognized Automobile Clubs. The contest committee is hereby directed to have such a cup specially designed, of a character and value representative of the international importance of this event.

Resolver, That the Automobile Club of America organize and conduct each year the following events:

First—The international road race for "The Grand Prize of the Automobile Club of America" under the rules of the International Association of Recognized Automobile Clubs as may be adopted each year.

Second—An international stock car race for the Briarcliff trophy.

Third—A long distance touring car contest.

Fourth—A hill climbing contest.

Another meeting of the aforementioned people was held this week and all that emanated from the meeting rooms were exultant chuckles over the cablegrams that were read from the trade-controlled Automobile Club of France, besides the German club, and two other clubs which have never had cars in the Vanderbilt cup race, namely, the Royal Automobile Club of Great Britain and Ireland and the Automobile Club of Belgique. The Automobile Club de France, for which the Automobile Club of America acts as agent in this country, stated that it had held a meeting and had decided to recognize as official only the so-called grand prize race to be run by the New York club and to disqualify all French cars taking part in the Vanderbilt cup race, as well as to recognize the Automobile Club of America as its official representative. The English club congratulated the New York club on organizing a race and the German club indorsed the race besides stating that it would enjoin the German manufacturers to not participate in the Vanderbilt cup race. The Belgium club stated that it will maintain and respect the rules adopted at the conference at Ostend, in 1907. The Automobile Club of Afghanistan has not yet been heard from.

A cablegram from a Frenchman named Hogan, who apparently cannot read the English language correctly, also was received. It stated that the A. A. A. had made overtures to the French club. The "overtures" were the resolutions adopted by the A. A. A. informing the foreign bodies that it was the ruling organization in America and that communications addressed to it would receive courteous consideration.

Later, advices from Savannah, Ga., state that the Savannah Automobile Club, which sought the Vanderbilt cup race and didn't get it, has executed a flip-flop and will join with the A. C. A. in promoting the "Grand prize race race" for outlaws.

FOR THE VANDERBILT CUP RACE

Date Fixed and Long Island Course Selected—Eliminating Trials will be Held, if Necessary.

The Vanderbilt cup race will occur on October 24th next, over a course on Long Island, which will include a portion of the motor parkway, work on which will be commenced on Saturday next, when 1,500 men will undertake its construction.

Announcement of these facts preceded by a day or two the issuance of the entry blank which gives other details.

Not more than ten cars will represent any one country and not more than three of any one manufacture. In the event of there being more than ten entries from a foreign country, the club representing such country will select the ten cars to compete. The club failing to make such selection before August 15th, 1908, the selection shall be made by the Vanderbilt cup commission.

In event of there being more than ten entries from the United States, the racing board of the American Automobile Association will decide by a trial race of at least 250 miles to be held at least two weeks before the cup race, which of the entries shall compete in the cup race. This trial race will be limited to the first 30 cars entered to represent the United States, and the first 10 cars to finish shall be selected.

The distance of the cup race itself will be not less than 250 miles and not more than 300. Entries will close September 1st. Until that date the entry fee will be $1,000; thereafter, it will be doubled.

Despite the peanut politics being played by the Automobile Club of America, so-called, in an effort to injure the race and the A. A. A., Chairman Jefferson De Mont Thompson has no fear of a dearth of foreign entries. He states that already he has been promised several foreign entries, while American manufacturers are building cars for the race, one entry of a six-cylinder car having been made this week. If the rules adopted at the Ostend conference and espoused by the A. C. A. were to govern the Vanderbilt race, six-cylinder cars would have been barred, even though they met the cylinder capacity requirement.

Another thing that happened this week which shows how small a foundation the Automobile Club of America stands upon to conduct a race of any sort is the authorized statement of Thomas Henderson, president of the National Association of Automobile Manufacturers, representing all the manufacturers in America. It is to the effect that the American manufacturers will stand by the American Automobile Association, which they recognize as the governing body, and will sustain and abide by its rulings.

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RHODE ISLAND GRADES THE FEES

New Automobile Law in Effect on First of June—Its Enforcement in Hands of Board of Public Roads.

After many vicissitudes in the Rhode Island Assembly the several automobile measures that body has had under consideration during the present session have been crystalized in a new law which was passed by both branches on the 26th ult., and soon after was signed by the Governor. The law went into effect on Monday, 1st inst.

The groundwork of the new law will readily be recognized as being based on the Connecticut statute. One of its noteworthy provisions transfers from the Secretary of State to the Board of Public Roads all the business of registration of motor vehicles and licensing of operators. It establishes a graduated scale of fees for automobile licenses, based on horsepower rating, and ranging from $5 up to $25, with a special fee for dealers fixed at $50. Automobile trucks are not included in this scale, the fee required for their registration being only 50 cents. Motorcycles will be registered for the same fee. Operator's license fees are fixed at 50 cents for motorcycles and $1 for other motor vehicles. Visiting motorists are allowed 20 days in which to register. Speed is limited to 15 miles per hour in compact sections and 25 miles elsewhere. No racing on public roads is permissible under the law. Tire chains may be used on slippery roads. Cities and towns are prohibited from enacting or enforcing ordinances setting speed limits, or otherwise regulating motor vehicles except that they may exclude them from certain roads in their respective municipalities, other than State roads or main highways. Such closed roads must be designated by signs.

Exceeding the speed limit, operating a vehicle when intoxicated, or racing on the road on a bet or wager, or to make a record may be punished by a fine of not more than $200, or imprisonment for not more than 30 days, or both, for a first offense; for a second offense the penalty is a fine of not more than $500, or imprisonment for not more than 60 days, or both; for a third offense, within any one calendar year, the penalty is imprisonment for not more than 90 days, and disqualification for a term of two years. For making false statements on applying for registration, or for operating without a license the penalty is a fine of not more than $500, or imprisonment for not more than 60 days, or both. Violation of any of the other provisions of the law entails a penalty of a fine not exceeding $100, or imprisonment for not more than 30 days, or both. The full text of the new law follows:

Section 1. Definitions. The words and phrases used in this act shall, for the purposes of this act, unless the same be contrary to or inconsistent with the context, be construed as follows: (1) "Motor vehicle" shall include all vehicles propelled by mechanical power, except road rollers, street sprinklers, fire engines and apparatus, police patrol wagons, ambulances, and such vehicles as run only upon rails or tracks; (2) "motorcycle" shall include only those motor vehicles having pedals and saddle, with driver sitting astride; (3) "registration" has reference to vehicle; registration of a motor vehicle by the owner or person in control thereof does not give such person the right to operate the machine upon the public highways; (4) "license" has reference to the operator; each person who operates a motor vehicle must have an operator's license; (5) "public highways" shall include any highway, State road, public street, avenue, alley, park, parkway, driveway or public place in any city, village or town; (6) "closely built up" shall mean (a) the territory of a city, village or town contiguous to a public highway which is at that point built up with structures devoted to business, (b) the territory of a city, village or town contiguous to a public highway not devoted to business, where for not less than one-quarter of a mile the dwelling houses on such highway average less than 100 feet apart, and also (c) the territory outside of a city or village contiguous to a public highway within a distance of one-half mile from any post office; provided, that for a distance of at least one-quarter of a mile within such limits the dwelling houses on such highway average less than 100 feet apart; and provided, further, that the city and town officers having charge of such highway shall have placed conspicuously thereon signs of sufficient size to be easily readable by a person using the highway, bearing the words, "slow down to 15 miles," and also an arrow pointing in the direction where the speed is to be reduced.

Sec. 2. Every owner of one or more motor vehicles shall file in the office of the State Board of Public Roads, on a blank furnished by said Board, a statement, under oath, of his name, residence and post office address, and a brief description of each motor vehicle owned or controlled by him, including the name of the maker, the number, if any, affixed by the maker, the character of the motor power and the amount of such motor power stated in figures of horsepower as advertised by the maker thereof, and such other information as shall be required by said Board. The said Board shall then register each such motor vehicle, assigning to it a distinguishing number or mark, and shall thereupon issue to the owner thereof a certificate of registration which shall contain the name, place of residence and post office address of the owner and the number or mark assigned to such motor vehicle, and such certificate shall at all times be carried upon such motor vehicle and shall be subject to examination upon demand by any proper officer. The certificates provided for in this section and in section 3 shall continue in force until one year from the date of issue, and upon the renewal of any such certificate said Board shall reassign the distinguishing number or mark contained therein.

Sec. 3. Every manufacturer of or dealer in motor vehicles may, instead of registering each motor vehicle owned or controlled by him, make application under oath to said Board for a general distinguishing number or mark, and said Board may, if satisfied as to the facts stated in said application, issue to the applicant a certificate of registration containing a name, place of residence and post office address of the applicant and the general distinguishing number or mark assigned to him; and all motor vehicles owned or controlled by such manufacturer or dealer shall, until sold or let for hire, or loaned for a period of more than five successive days, be regarded as registered under, and having assigned to them, such general distinguishing number or mark. Manufacturers or dealers shall not be required to carry such certificates upon the vehicles registered under the provisions of this section, but every person operating a motor vehicle registered under the provisions of this section shall display on such vehicle, in such manner as said Board may prescribe, the operator's license number assigned to such person.

Sec. 4. Every motor vehicle, except motorcycles, shall, at all times while being used or operated upon the public highways of this State, have displayed in a conspicuous place and manner a plate or marker entirely unobscured and securely fastened upon both the front and the rear of such motor vehicle, the plate or marker on the rear thereof to be fastened so as not to swing. Said plates or markers shall be obtained from the State Board of Public Roads, as hereinafter provided, and shall bear the initial letters of this State and the number and mark assigned to such motor vehicle, the figures theron to be not less than four inches high and each stroke thereof to be not less than one-half inch wide; and in case of plates or markers not in use on motor vehicles on the date that this act takes effect, the letters and figures thereon to be not less than four inches high and each stroke thereof to be not less than one-half inch wide.

Sec. 5. Every motorcycle shall, at all times, while being used or operated upon the public highways of this State, have displayed thereon the initial letters of this State and number or mark assigned to such motorcycle, such letters and figures to be at least one inch high, and either painted on such motorcycle or displayed on a plate or marker securely fastened thereto, and no motorcycle shall be operated with its muffler open.

Sec. 6. The State Board of Public Roads shall keep a record of all statements filed with said Board and of all certificates issued by said Board, which shall be open to public inspection; and said Board shall furnish, from time to time, at cost price, to any person having a motor vehicle registered under the provisions of this act, as many plates or markers as may be required by such person for display upon such motor vehicle. Upon the transfer of ownership of any motor vehicle its certificate of registration shall expire, and said Board, at its discretion, may reassign the distinguishing mark or number described in such certificate. In the event that any certificate or license issued by said Board under the provisions of this act shall be lost or destroyed, said Board shall issue to the person whose certificate or license has been so lost or destroyed, a duplicate thereof. In the event that said Board is unable to immediately furnish any plate or marker provided for by this act to any person entitled thereto, said Board may issue a certificate to such person stating that such marker has been ordered and giving the number thereof, and such person may thereafter use a temporary plate or marker, similar in form to the plate or marker provided for by this act, until said plate or marker has been so furnished.

Sec. 7. No person shall operate a motor vehicle upon the public highways of this State until he shall have first obtained a license for that purpose, but nothing herein contained shall prevent the operating of a motor vehicle by an unlicensed person other than a person whose application has been refused or whose license has been sus-

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pended or revoked, if accompanied by a licensed operator, which licensed operator shall also be personally liable for any violation of the provisions of section 11, 12 or 13 of this act. Licenses for operating motor vehicles shall be issued by the State Board of Public Roads, but no license shall be issued to any person under the age of 16 years. Any applicant for a license to operate a motor vehicle upon the public highways shall be required by said Board to show such knowledge of the mechanism of motor vehicles, the rules of the road and the motor vehicle law, as will, in the opinion of said Board, render said applicant a proper and safe person to operate said vehicle upon the public highway. The State Board of Public Roads may, at its discretion, refuse to grant a license for operating a motor vehicle upon the public highways to any applicant whom, for any reason, it considers an improper person. Applications for licenses shall be made under oath upon blanks furnished by said Board, and said application blanks and said licenses shall be in such form and contain such provisions, not inconsistent with this act, as said Board may determine. A number shall be assigned to each license, and a proper record of all applications for licenses and of all licenses issued shall be kept by said Board at its office, and shall be open to public inspection. Each license shall state the name, place of residence and post office address of the licensee, and the number assigned to him. Said license shall continue in force until one year from the date of issue, unless suspended or revoked for cause, and shall at all times be carried by the licensee when he is operating a motor vehicle upon the highways of this State, and shall be subject to examination upon demand by any proper officer; and said licenses shall have indorsed thereon in the proper handwriting of the licensee the name of said licensee and when requested by a proper officer, in the discharge of his duties under this act, said licensee shall write his name in the presence of said officer, to the end that the identity of said licensee may be determined.

Sec. 8. The following fees shall be paid to the State Board of Public Roads for the certificates and licenses issued by it in accordance with the provisions of this act: Five (5) dollars for each certificate of registration of a motor vehicle, other than a motorcycle or automobile truck of 20 horsepower or less; ten (10) dollars for each motor vehicle over 20 horsepower and not more than 30 horsepower; fifteen (15) dollars for each motor vehicle of more than 30 horsepower and not more than 40 horsepower; twenty-five (25) dollars for each motor vehicle of more than 40 horsepower; fifty (50) cents for each certificate of registration of a motorcycle or automobile truck or duplicate thereof; fifty (50) dollars for each dealer's or manufacturer's certificate; one dollar for each original license or duplicate thereof to operate a motor vehicle other than a motorcycle; fifty cents for each original license or duplicate thereof to operate a motorcycle.

Sec. 9. The State Board of Public Roads may after due hearing upon not less than three days notice in writing, suspend or revoke the license issued to any person under section 7 of this act, for any cause which it may deem sufficient; but every application shall be refused by said Board, and every licensee whose license shall be suspended or revoked by said Board, may appeal to the Superior Court from such decision, refusal or revocation, which court may affirm or overrule the decision of said Board. Every District Court in this State shall in every case in which a person is convicted of a violation of any of the provisions of section 11, 12, or 13 of this act within 10 days after such conviction therein, transmit notice thereof to the State Board of Public Roads. Said courts may furnish to said Board the details of all flagrant cases which may be heard before them, and they may make such recommendations to said Board as to the suspension or revocation of the licenses of the parties defendant in such cases as they may deem proper. Said Board shall keep such data in its office, which shall be open to public inspection. Whenever any person licensed to operate a motor vehicle upon the public highways of the State shall have been convicted of any violation of section 11, 12 or 13 of this act, said Board may revoke the license of such person, and require the license of such person, and require a return of the same. No person shall, for the period of three months from the date of the revocation of his license, be capable of receiving a new license, nor thereafter except in the discretion of said Board.

Sec. 10. Any non-resident of this State who shall have complied with the laws of the State or territory of the United States in which he resides, requiring the registration of owners of motor vehicles, or of motorcycles, or of both, and the display of identification numbers on such vehicles, and who shall cause the identification numbers of such State or territory, in accordance with the laws thereof, and none other, together with the initial letter or letters of such State or territory, to be displayed on his motor vehicle while used or operated upon the public highways of this State, may bring his motor vehicle into this State for use on its highways without complying with the provisions of the foregoing sections of this act; provided, however, that if said non-resident shall use his motor vehicle on the highways of this State more than twenty (20) days in any one calendar year he shall then be subject to and shall comply with said provisions, and if he shall be convicted of violating, on any of said 20 days, any provisions of section 11, 12 or 13 of this act, he shall immediately be subject to and required to comply with all the provisions of this act relating to the registration of motor vehicles and the licensing of operators thereof.

Sec. 11. No person shall operate or cause to be operated a motor vehicle on the public highways of this State recklessly or at a rate of speed greater than is reasonable and proper, having regard to the width, traffic and use of the highway, or so as to endanger property or the life or limb of any person, or in any event on any public highway, where the territory contiguous thereto is closely built up, at a rate of speed greater than 15 miles per hour, or elsewhere at a rate of speed greater than 30 miles per hour, subject, however, to all other provisions of this section, and of this act relative to the operation of such vehicles.

Sec. 12. Upon approaching any person standing or walking in the traveled portion of any public highway, or a horse or any other draft animal being led, ridden or driven therein, or a crossing of intersecting public highways, or a bridge, or a sharp turn, or a curve, or a steep descent, and also in passing such person or such horse or other draft animal, and in traversing such crossing, bridge, turn, curve or descent, the person operating a motor vehicle shall have the same under control and shall reduce its speed to a reasonable and proper rate. If such horse or other draft animal being so led, ridden or driven shall appear to be frightened, or if the person in charge thereof shall signal so to do, the person operating such motor vehicle shall bring the same and the motor or other power propelling the same immediately to a stop, and if traveling in the opposite direction, shall remain stationary so long as may be reasonable to allow such horse or animal to pass, or if traveling in the same direction, shall use reasonable caution in thereafter passing such horse or other animal. Upon approaching a crossing or intersecting highways, a bridge, sharp turn, curve, or a steep descent, the person operating a motor vehicle shall slow down and give a timely signal with his bell, horn or other device for signaling. Whenever two vehicles meet on a public highway, the operator of each vehicle shall reasonably keep to the right so as to pass without interference. Whenever one vehicle overtakes another, the one in the rear shall give timely signal as aforesaid, and shall pass on the left, and the operator of the one in front shall seasonably bear to the right so as to allow free passage on the left. The driver of any motor vehicle on any highway, approaching an intersecting highway, shall slow down and keep to the right of the intersection of the centers of both highways, when turning to the right, and pass to the right of the intersection of the centers of said highways before turning to the left. Every driver of a motor vehicle, after knowingly causing an accident by collision or otherwise, or knowingly injuring any person, horse or vehicle, shall forthwith bring his motor vehicle to a full stop, return to the scene of the accident and give to any proper person, demanding the same, the number of his driver's license, the registration number of the motor vehicle, and the names and residences of each and every male occupant of said motor vehicle.

Sec. 13. No person shall operate a motor vehicle on the public highways of this State when intoxicated, or in a race, or on a bet or wager, or for the purpose of making a record.

Sec. 14. No city or town shall have power to make any ordinance, by-law or resolution respecting the speed of motor vehicles, and no ordinance, by-law or resolution heretofore or hereafter made by any city or town in respect to motor vehicles shall have any force or effect: Provided, however, that city and town councils of the several cities and towns may exclude motor vehicles from certain roads in their respective towns, and shall designate such roads by public signs; Provided, that such roads excluded shall not include State roads or main highways leading from town to town, and provided further, that powers given to any city or town to regulate shows, processions, assemblages or parades in streets and public places, and to regulate the use of public parks, and all ordinances, by-laws and regulations which may have been or which may be enacted in pursuance of said powers shall remain and be in full force and effect.

Sec. 15. No motor vehicle, while in use on the public highways of this State, shall have displayed upon either the front or the rear of such vehicle more than two registration plates or markers, nor shall any person display, or permit to be displayed upon his motor vehicle the registration number belonging to another vehicle or person, or a fictitious number, plate or marker.

Sec. 16. Every motor vehicle, while in use on the public highways of this State, shall be provided with adequate brakes, with a muffler and with a suitable bell, horn or other device for signaling, and shall, during the period from one hour after sunset to one hour before sunrise, display one or more white lights on the forward part of such vehicle, so placed as to be seen from the front, and shall also display, on the rear of such vehicle, a lamp so placed that it shall show a red light from the rear and a white light at the side, and so arranged as

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to illuminate the rear number or marker, all of which said lights shall be of sufficient illuminating power as shall be prescribed by the State Board of Public Roads.

Every motor vehicle shall be provided with a lock, key or other device to prevent said vehicle from being set in motion, and no person shall allow any such vehicle operated by him to stand or remain unattended in any street, avenue, road, alley, highway, park, parkway or other public place without first locking or making fast the vehicle as above provided. No motor vehicle tire shall be fitted with a chain when used upon gravel, macadam or other made roads, except upon natural dirt, asphalt, cobble, Belgium block or vitrified brick pavements: Provided, however, that tires may be fitted with a chain when reasonably necessary for safety in case of slippery roads.

Sec. 17. No person shall interfere or tamper with a motor vehicle without the permission of the owner.

Sec. 18. Any person violating any provision of sections 11 or 13 of this act shall for the first offense be fined not more than $200 or imprisoned not more than 30 days, or both; and shall for the second offense be fined not more than $500 or imprisoned not more than 60 days, or both; and shall for the third offense within any one calendar year be imprisoned for not more than 90 days, and shall thereby forfeit his license and be thereby disqualified from obtaining any such license within two years thereafter. Any person making false affidavit under the provisions of sections 2, 3 and 7 of this act, or who shall register or cause to be registered any motor vehicle in the name of any person other than the owner thereof, shall be fined not more than $500 or imprisoned not more than 60 days, or by both such fine and imprisonment. Any person violating any other provision of this act shall be fined not more than $100 or imprisoned not more than 30 days, or both, for every such violation, and any court before whom a final conviction shall be had, under the provisions of sections 11, 12 or 13, of this act, shall indorse upon the license of the person convicted the date and particulars of such conviction.

Sec. 19. All money collected for registration, and license fees and fines under the provisions of this act shall be turned over to the general treasurer, to be used for the repair and maintenance of State roads and highways in this State, under the direction of the State Board of Public Roads.

Sec. 20. Any person arrested for violating any of the provisions of this act may tender as bail a motor vehicle of which he is the owner, and if his interest in such vehicle is of sufficient value, it may be accepted as security for his appearance, in lieu of any other bail.

Sec. 21. All certificates of registration of motor vehicles issued under the provisions of chapter 1157 of the Public Laws, passed at the January session, 1904, shall continue in force for 90 days after this act shall go into effect, but every owner of a motor vehicle so registered shall register such motor vehicle in accordance with the provisions of this act before the expiration of said 90 days.

Sec. 22. The State Board of Public Roads may assign to any motor vehicle, registered under the provisions of this act, the same registration number and the same plates or markers heretofore assigned to it or used under the authority of chapter 1157 of the Public Laws, passed at the January session, 1904.

Sec. 23. The Secretary of State is hereby authorized and directed to turn over to the State Board of Public Roads all records of the certificates of registration issued by him in accordance with the provisions of chapter 1157 of the public laws, passed at the January session, 1904, which shall be in his custody at the time this act takes effect.

Sec. 24. The State Board of Public Roads may employ such asistance and incur such expense as may be necessary to carry out the provisions of this act, and the sum of two thousand dollars ($2,000), or so much thereof as may be necessary, is hereby appropriated, out of any money in the treasury not otherwise appropriated, to defray the expenses of such Board in carrying out the provisions of this act; and the State Auditor is hereby authorized to draw his order upon the General Treasurer for the payment of the said sum, upon the receipt by him of properly authenticated vouchers.

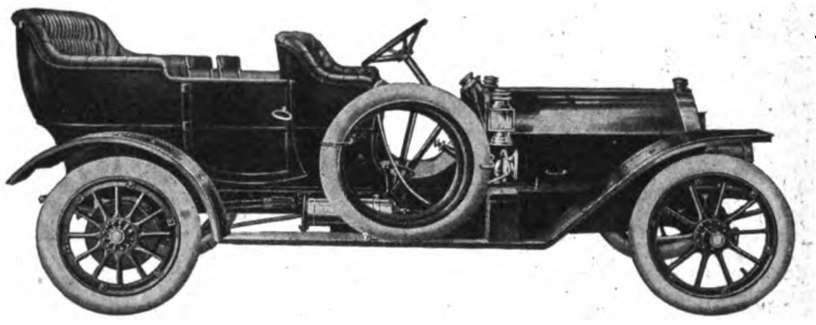
Sec. 25. Chapter 1157 of the Public Laws, passed at the January session, 1904, and all acts and parts of acts inconsistent herewith, are hereby repealed, and this act shall take effect from and after the first day of June, 1908.

Wildwood Club Holds Summer Election.

The Motor Club of Wildwood, which flourishes at the New Jersey coast resort of that name in the summer season, has elected to serve during the current summer the following officers: President, Philip P. Baker; vice-president, Evans G. Slaughter; treasurer, J. Thompson Baker; secretary, V. G. Reynolds; racing secretary, H. L. Hamersley; trustees, Thomas S. Goslin and John Bright.

THE PREMIER

The car which can be depended upon to do things and do them well



¶ It is probable that no fully equipped touring car was ever called upon to attempt an undertaking as trying as the work of laying out the 1908 Glidden Tour.

¶ The unusual difficulties were due to the condition of the roads, so thoroughly water soaked as to render them practically bottomless. The Premier met every requirement successfully and without delay to the party or car.

¶ If considering the purchase of a car the performance of this *regular stock Premier* means something.

¶ Our Glidden Tour booklet and catalogue will be sent you upon request.

PREMIER MOTOR MANUFACTURING COMPANY, Indianapolis, Indiana

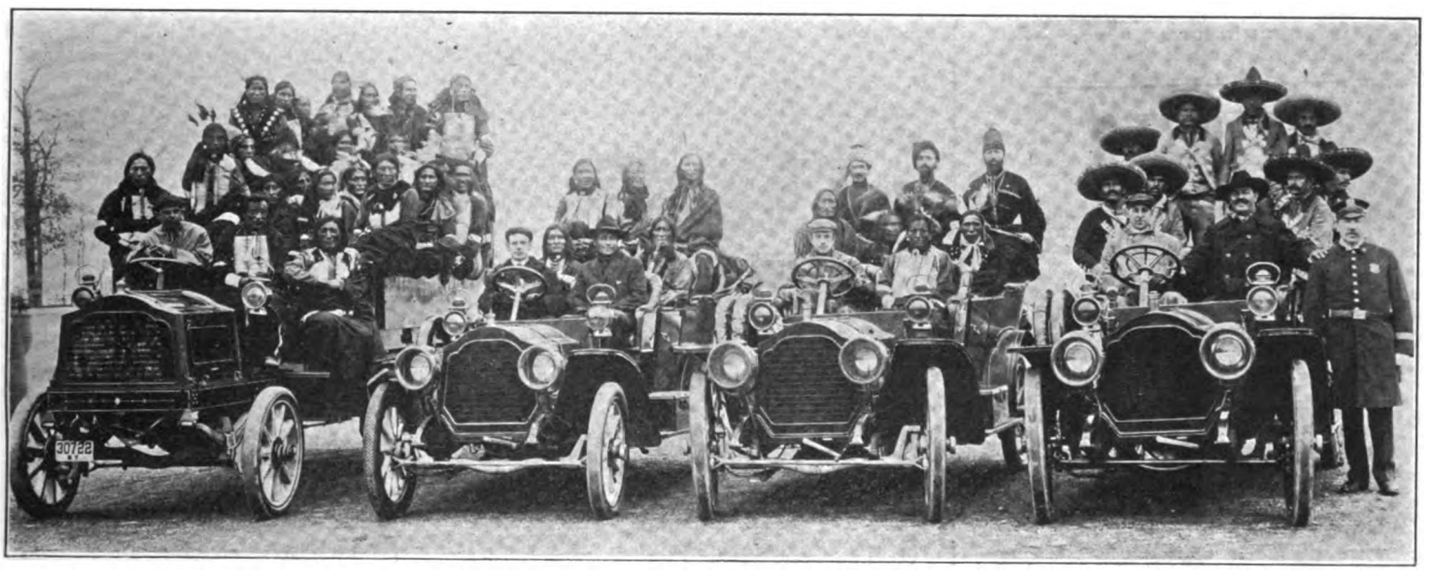
Members American Motor Car Manufacturers' Association.

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HORSEMEN IN HORSELESS VEHICLES

Types of Famed Equestrians, from Plain, Steppe and Sierra, as They Appeared Grouped in Automobiles.

When the circus comes to town even little old New York sits up and takes notice. And when Buffalo Bill's Wild West and Congress of Rough Riders of the World appears, the town sits up again and takes more notice, for while the Wild West really isn't the circus, it looks a good deal like it and causes much the same sort of thrills. When Buffalo William arrived here the last time the press agent got busy and the accompanying photograph is the result.



REPRESENTATIVES OF HORSE LOVING RACES GROUPED IN HORSELESS VEHICLES

While there is nothing especially novel in the idea of photographing the peoples of different parts of the world in automobiles, this picture is of interest in that it depicts a group of three different peoples who are world famed as horsemen—Indians, Russian Cossacks and Mexicans.

Puzzling Disappearance of Cash Bail.

One of those queer experiences that sometimes come to motorists who fall into the clutches of the police was aired in the second District Court, Newark, on Friday, 22d ult. Frank P. Venable, of Paterson, told Judge Lintott that having been arrested in Bloomfield on a charge of exceeding the speed limit he was taken before Policeman John Blum, who was acting desk sergeant at the Bloomfield station. Putting up $20 to assure his appearance in court the next day, he was permitted to go. When he made his appearance the next day the recorder was not on hand to try the case and since then, he said, he has received no notice to appear. For that reason he wanted his money back. Blum admitted having received the money which, he said, he turned over to his chief. The court, after hearing both stories, declared that Venable ought to have his money, but couldn't collect it from Blum, as the policeman had acted in an official capacity and properly had turned it over to his superior officer. The $20 is supposed to be at the present time in the custody of the commissioner of motor vehicles.

Owners Must Pay Two-Ply Tax.

When City Controller George T. Breunig, of Indianapolis, gets his plans for collecting automobile taxes fully into operation, many owners in that city will have a two-ply demand to met. Breunig purposes not only the enforcement of the ordinance requiring an annual license fee of $3, but to compel owners to pay the 1907 fee which they refused to pay, pending the settlement of the question as to the validity of the ordinance.

Owners of automobiles insisted, until a recent decision by Judge Allen, of the Circuit Court, that the city's ordinance as it applies to automobiles was unconstitutional, as it was in conflict with the State law governing the licensing and control of motor vehicles. Judge Allen held, however, that it is not, as the city ordinance is a revenue measure, whereas the State law is purely a measure for police regulation. Automobile dealers, who brought the suit to test the ordinance, decided not to appeal the case from the Circuit Court, so the controller's office has ample authority for the severe measures which it is proposed to adopt to bring in the overdue fees for 1907 as well as those for 1908.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

COOLED CYLINDERS WITH COLD TEA

Odd Expedient of Lieut. Graetz During Long African Journey—His Progress Across the Dark Continent.

The attempt to reach Paris from New York, by automobile service, and by the indirect route via the American and Asiatic continents, have served to blot out of mind the efforts which a German army officer is putting forth to cross Africa by the same expeditious means. While the public has forgotten him, however, it appears that the ambitious Lieutenant Graetz has not been idle. When last heard from, he had fared to Fort Jameson in northeastern Rhodesia, some 100 miles west of Lake Nyassa, and a little north of its southern end. Up to that point he had covered about 1,500 miles, exclusive of detours required by exigencies of the country.

Starting from Dar-es-Salaam, the capital of German East Africa, he succeeded in making his way through Tabora to the southern end of Lake Tanganyka, whence he traced the road to Lake Nyassa, familiarized by Stevenson's "In Darkest Africa." The expedition has been 8 months on the trail, but was laid up in the Usagara Mountains, waiting for the arrival of a new cylinder from Europe, needed to replace one which had been cracked.

The book of his adventures is yet to be published, of course, but when issued, it is expected to contain a series of thrilling incidents, which the snow-ploughing exploit in North America can in no way equal. These will include a little of most everything from impromptu bridge building to running a motor with cold tea in the radiator across the Ugogo desert, where human thirst was wholly secondary to the demand of the parched cylinders for something cooling.

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The Week's Patents.

883,146. Bearing for Supporting Radiators in Automobile Frames. Percy W. Noble, New York, N. Y., assignor to Charles A. Singer, Larchmont, N. Y., and Henry U. Palmer, Brooklyn, N. Y. Filed Nov. 23, 1907. Serial No. 403,493.

1. In combination, an automobile frame carrying a bearing box provided with a bearing seat, a radiator supporting saddle carrying a trunnion provided with a bearing surface, and a retaining bearing cone adapted to engage with said bearing box and the said surface of the trunnion.

883,167. Attachment for Motor Vehicles. Joseph H. Carpenter, Jr., and George J. F. Carpenter, Ossining, N. Y. Filed Jan. 9, 1904. Serial No. 188,297.

A device of the character described including a frame adjustably fastened to the rear frame of a vehicle comprising a sheet of canvas rigidly mounted on said frame, strengthening ribs intermediate of the side rods of said frame, said strengthening ribs being so shaped as to form a double deflecting line at the rear end of said vehicle.

883,179. Steering Gear for Motor Machines. Homer B. Ditwiler, Mansfield, O., assignor of one-fourth to Lewis W. Roe, Mansfield, O. Filed Nov. 7, 1907. Serial No. 401,075.

1. In a steering gear for motor machines, a steering shaft formed with right and left screw threads, companion blocks having relatively opposite threads for engagement with the threads of said shaft, said blocks being formed with concave under faces and a yoke mounted for rocking movement and having its ends free and in constant contact with the corresponding concave under faces of said blocks.

883,202. Vehicle Brake. Edward A. Johnston, Sterling, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Aug. 16, 1907. Serial No. 388,761.

1. A brake mechanism for vehicles having, in combination, rotatable friction elements deriving motion from the road wheels, relatively fixed friction elements mounted upon a part of the vehicle, means for causing said fixed elements to engage with said rotatable elements, said means comprising separate rock-shafts, means for rocking said shafts in opposite directions, said means including separate lever arms secured to said shafts and extending in opposite directions from the axes thereof, a flexible connection between the outer ends of said arms, a brake controlling member adapted to be manipulated by the operator and having one end slidably engaging with said flexible connection intermediate the ends thereof.

883,207. Air Cooled Gas Engine. Cyrus B. Kurtz, Cleveland, Ohio, assignor of one-half to Frederick C. Bosworth, Cleveland, Ohio. Filed Aug. 27, 1906. Serial No. 332,127.

1. In an explosion motor, the combination with a crank shaft and connecting rod, of a cylinder open at both ends and comprising two portions having different diameters; and a hollow piston comprising two bearing portions fitted to the two portions of said cylinder, respectively, the portion of said piston having the smaller diameter being adapted in said piston's upper piston to project without said cylinder and said connecting rod being attached to such portion whereby the pin holding said connecting rod may be removed without withdrawing the piston from the cylinder.

883,215. Seat Iron. George W. Luke, Jackson, Mich. Filed Sept. 12, 1907. Serial No. 392442.

1. The combination with a vehicle body of a seat iron secured to the inner side of the seat frame, and having an interiorly screw-threaded socket extending outwardly from the upper end thereof, a bracket support having a shank in screw threaded engagement with the socket, a check-nut on the shank bearing against the socket and a goose neck removably secured to the outer end of the bracket support, the bracket support being provided with a tapering aperture and the gooseneck with a corresponding foot seated in said aperture.

883,240. Internal Combustible Engine. Louis G. Sabathe, Paris, France. Filed Nov. 23, 1905. Serial No. 288,712.

1. In an internal combustion engine, the combination, with means for introducing a charge of inert gas, of means for subsequently and separately introducing a charge of combustible material and a charge of oxygen.

883,261. Wind Shield. James Webster. Chicago, Ill. Filed Feb. 6, 1907. Serial No. 356,073.

1. In a wind shield, in combination, a plurality of sections, hinges uniting adjacent sections and having a sliding engagement with one of the sections.

883,266. Starting Clutch. John F. Wilkinson, Gloucester, Mass. Filed April 19, 1907. Serial No. 369,093.

1. A clutch mechanism comprising a rotary member having an annular groove in a lateral face thereof, a stud having an eccentric head located in said groove, an arm supported so as to be movable bodily about the axis of said member by which said stud is carried non-rotatably, and driving means so engaged with the arm as to move the same both oscillatively and bodily to crowd the head of said stud between the walls of the groove and turn the said member.

883,274. Device for Carrying Spare Wheels or Tires on Motor Cars. Alfred J. Bailey, Salford, England. Filed May 28, 1907. Serial No. 376,180.

1. In combination with an automobile, a vertical standard mounted thereon, a frame extending laterally from the standard, means for swiveling the frame on the standard, and means for holding a tire to the frame.

883,340. Induction Valve for Internal Combustion Engines. Robert E. Phillips, Westminster, London, England. Filed April 22, 1904. Serial No. 204,448.

1. In induction valve mechanism for internal combustion or explosion engines of the four-cycle type, a valve casing carrying an induction valve and seat therefor and having a guide for the stem of the valve, a projection on the valve stem, a hollow plunger sliding in the casing and adapted to engage the said projection and through which the stem of the valve passes, a spring between the casing and the plunger acting to retain the valve in its closed position, and mechanical means for depressing the plunger to compress the spring and thus relieve the valve of its pressure.

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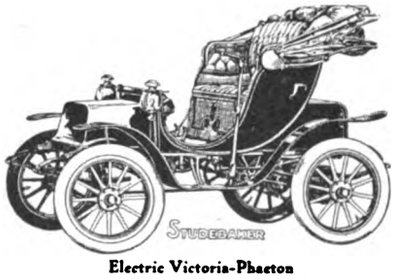
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883,347. Compressor. Edmund W. Roberts, Clyde, Ohio. Filed Sept. 29, 1906. Serial No. 336,755.

1. A multi-stage compressor comprising in combination compression cylinders of different stages, and an intercooler comprising a hollow annulus connected to both said cylinders and surrounding one of them.

883,371. Vehicle Steering Device. George H. Young, Des Moines, Iowa. Filed May 21, 1907. Serial No. 374,929.

1. In a device of the class described, the combination of a vehicle frame, four axles pivotally supported therein, a spring bar pivotally connected with the frame, a collar mounted on the inner end of each axle, arms connecting the ends of the spring bar with the collars on the forward axles, and crossed arms for connecting the spring bar with the collars on the rear axles.

883,398. Flexible Tire for Vehicle Wheels. Clement C. Gouin, Paris, France. Filed Oct. 2, 1906. Serial No. 337,074.

1. A vehicle wheel tire consisting essentially of pieces of leather disposed edgewise and secured together, separate end plates secured to the respective ends of said tire and separated by a space, a securing plug filling said space, and a device mechanicall connecting said plug to said end plates and also adapted to secure the plug to the wheel rim.

883,454. Mud Shield for Vehicle Wheel Guards. George W. Dunham, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed Dec. 1, 1906. Serial No. 345,918.

1. The combination with a wheel fender, of a sector shaped shield attached to one edge of said fender, a fender supporting arm, and an attachment between said shield and said supporting arm near the center of the sector.

883,461. Explosive Engine Starter. Carl C. Ilg, New York, N. Y., assignor, by direct and mesne assignments, of one-third to Nothan B. L. Cosel and one-third to Richard Frankenbush, New York, N. Y. Filed March 15, 1907. Serial No. 362,492.

1. In an explosive engine starter, the combination with an engine, of a shaft connected with the engine and by which the engine may be actuated, a wheel fitting said shaft movably, and said wheel having internal ratchet teeth, the said shaft having recesses extending lengthwise from one end the said wheel being placed on the shaft over the said recesses, pawls constructed to be inserted from the end of the shaft into said recesses after the wheel is in place and arranged to engage the ratchet teeth of the wheel, means for retaining the pawls against longitudinal displacement, and means for operating the wheel from a distance.

883,469. Roller Bearing. George A. McKeel, Jackson, Mich., assignor to George A. McKeel & Company, Limited, Jackson, Mich., a partnership association. Filed Feb. 16, 1905. Serial No. 245,894.

1. In a roller bearing, two rings spaced apart and each provided on its inner face with a plurality of approximately semi-spherical spaced recesses opening through the periphery of the rim, each of said rings having a channel in the periphery surrounding each opening to form a marginal flange at the upper end of the opening, rollers having ball ends bearing in said recesses, the said flanges on the periphery of the rings surrounding said recesses overlapping the ball ends of the rollers and forming the upper wall of the ball seat and also holding the rollers in position in the rings.

883,511. Gas Engine. George A. Beaudet, San Francisco, Cal. Filed July 19, 1907. Serial No. 384,581.

1. In a gas engine, the combination of a cylinder having an exploding chamber communicating with the cylinder space through a valve controlled opening, means operating to open the exploding chamber to the cylinder space when the cylinder is taking in gas and to shut off communication of said chamber with the cylinder space after the explosion of the charge, a valve controlled exhaust outlet leading from the exploding chamber, means operating to open the said chamber to the exhaust when said chamber is closed to the cylinder space, and to close it to the exhaust when the cylinder space is in communication with the said chamber, and a supplemental exhaust outlet leading from the lower part of the cylinder space and arranged to open said space to the exhaust when the piston is at the end of its stroke after an explosion.

883,557. Latch for Change Speed Gears for Automobiles. Emile L. P. Mors, Paris, France, assignor to The Societe Anonyme d'Electricite et d'Automobiles Mors, Paris, France. Filed Aug. 21, 1906. Serial No. 331,474.

1. The combination in shifting mechanism of an operating spindle, and a plurality of shifting rods parallel thereto and actuated thereby, and means for locking the remainder during the movement of one of the rods by said operating spindle.



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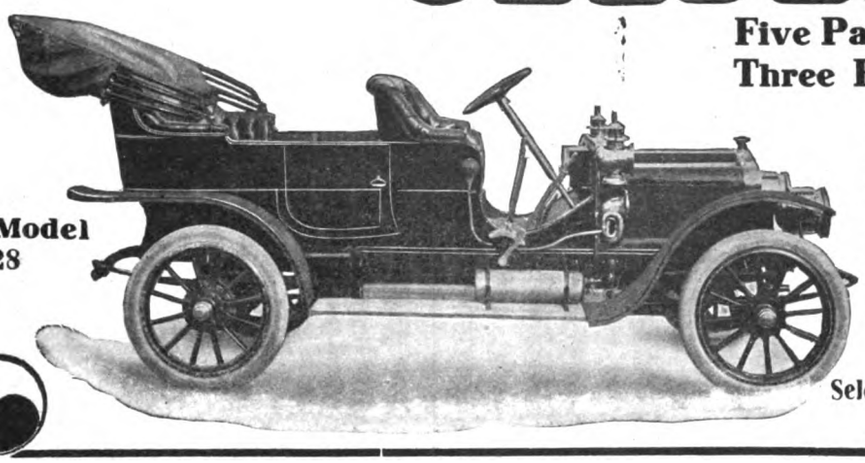


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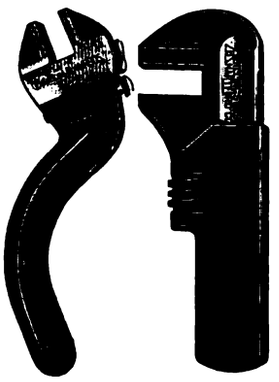
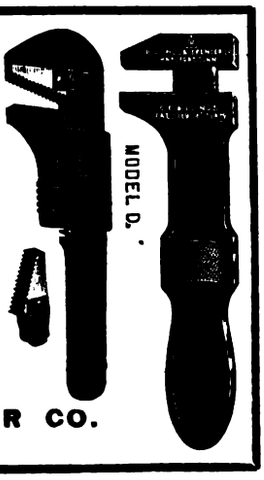
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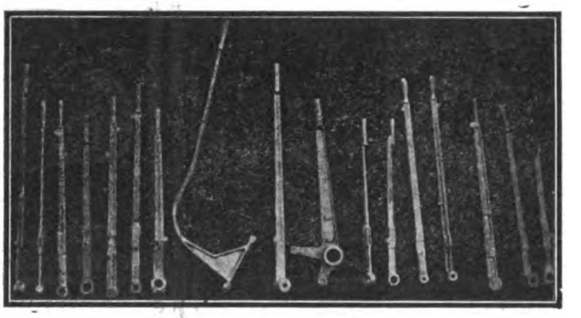
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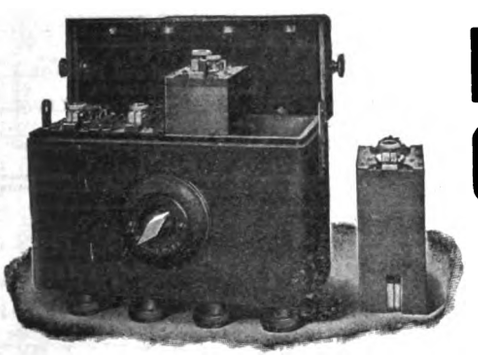
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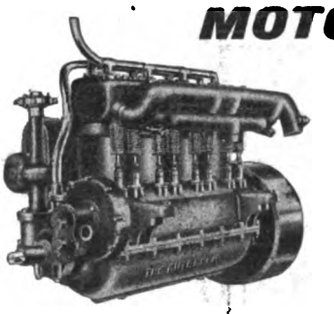


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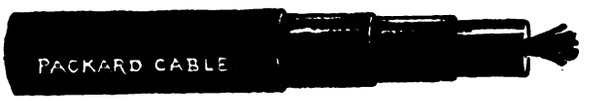
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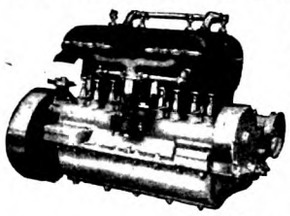
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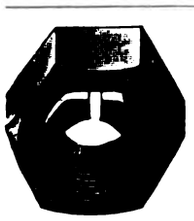
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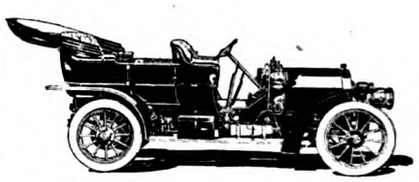


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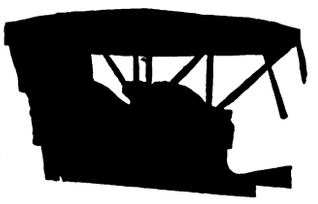


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(New every race)
EISEMANN MAGNETO
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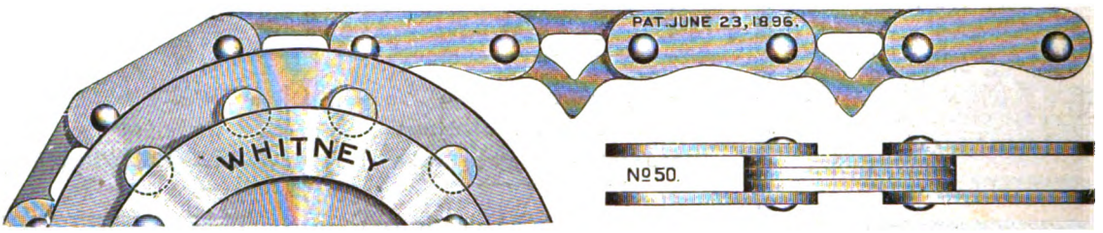
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***The* Car that does things**
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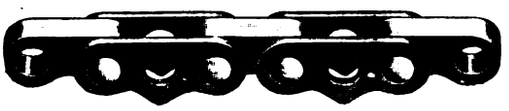
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"WHITNEY" CHAINS



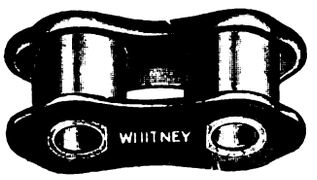

A


B

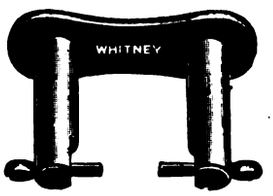

C



CONNECTING LINK



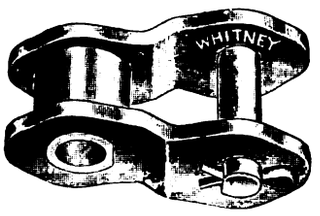
ASSEMBLED CENTER BLOCK



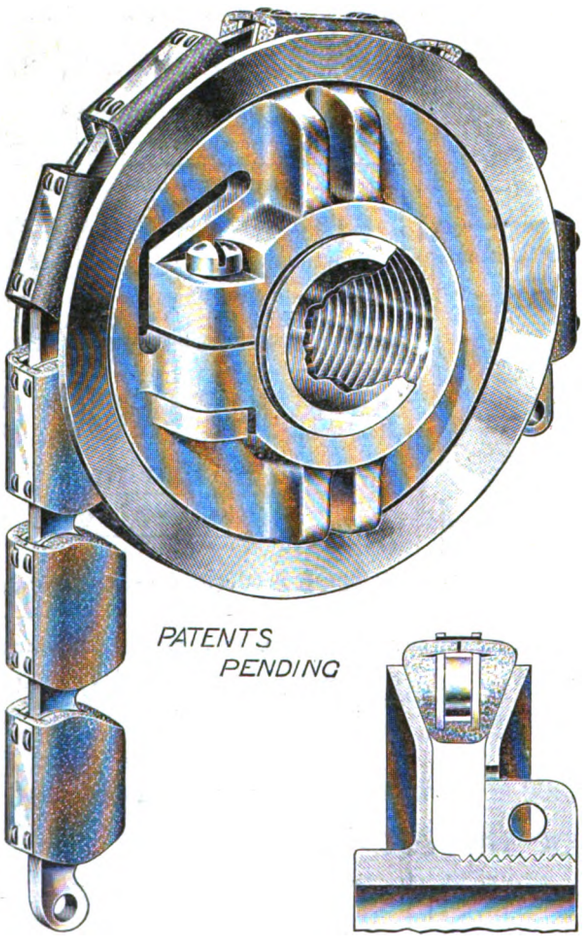
SIDE LINK with RIVETS ASSEMBLED



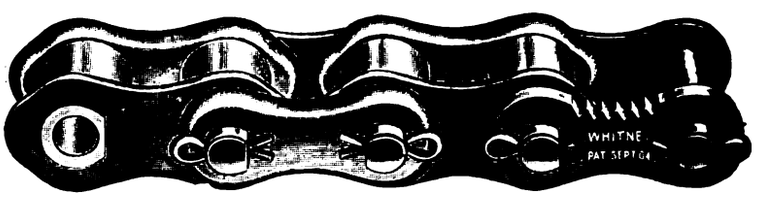
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OFFSET LINK



New "Whitney" CHAIN BELT and Adjustable Pulley



THE WHITNEY MFG. CO.

HARTFORD, CONN.

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lume XVIII New York, N. Y., U. S. A., June 11, 1908 Number 11

THE MOTOR WORLD

trade paper giving the
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Ten cents a copy—
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Solar Lamps—SHOW THE WAY

Exclusive Features of Solar Lamps

(7) SIMPLICITY

¶ By simplicity, we mean simplicity of construction; fewer parts; non-use of solder except where it is absolutely necessary; assembling through the use of interior screws or rivets. Consider the simplicity point in purchasing an automobile lamp — it is vitally necessary.



¶ Solar Lamps have fewer parts; less solder; are all assembled by internal screws. Therefore far more simple in construction.

Write for our 1908 Catalog.

Badger Brass Manufacturing Co.
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KENOSHA, WIS.

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"The tire with the doubt and the risk left out"

This phrase of ours—"the tire with the doubt and the risk left out"—has doubtless sung itself into your mind a good many times.

But its mere catchiness will have no value whatever if you have not stopped to think what it means.

It is much more than a mere catch-word—it is a simple statement of truth and fact concerning the Hartford Tires.

In fact, it is a literal description of that tire. The Hartford Tire IS the tire with the doubt and risk left out.

Because we use only the best Para; a special Sea Island cotton fabric made especially for us.

Because we employ an army of expert workmen who live in Hartford and who have been with us for years.

Because in our processes we are usually several years in advance. For instance, some of the new tire companies are exploiting as something new and original the wrapping of tires by mechanical means. This method in a highly advanced state has been used by us for the past three years.

Because we cure our clincher tires in the form they will be used under inflation.

Because our tires do not come in contact with the heated metal and receive the harsh heating, but are vulcanized by the steam process, *i.e.*, the tires are wrapped, placed in a special press and the live steam turned in, which effects the cure without the tires coming in contact with the mould.

Because Hartford Tires have consistently and persistently made good under the most arduous conditions of track, touring, road and hill-climbing contests.

They are preeminently the QUALITY TIRES of the world.

THE HARTFORD RUBBER WORKS CO.

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make it possible for us to import **THE CELEBRATED BRAMPTON CHAINS** from **ENGLAND** (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped **"BRAMPTON."**

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller ..... $1.00 per foot.
1 x ⅝ x ⅝ roller ..... 1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller ..... 1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

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We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. **Price 60 cents per bottle.**

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. **The list price of the Miller Jack, $3.50 each.**



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AT JAMAICA, L. I.
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THE ACME MIDGET

($2,000 Stock Model)

Won three first prices, was first in each trial, first at all distances and first each time it started.

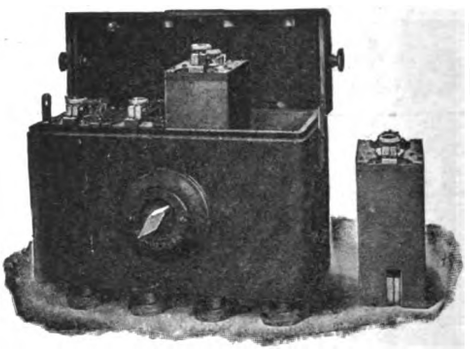
Two miles .....2 minutes 7 seconds
One mile .....1 minute 33⅕ seconds
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(The Acme six cylinder, in its class, also made two miles at the rate of 64.2 miles per hour.)

LET US SHOW YOU AS WELL AS TELL YOU

The Acme Motor Car Co.

Reading, Pa.



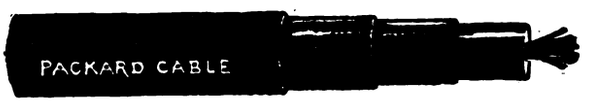
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Send for 1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

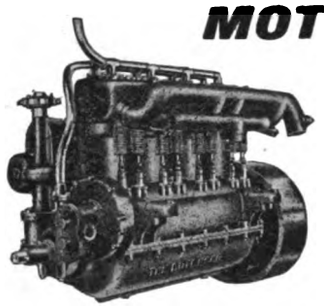
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Samples and Prices on Request.

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MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG—DURABLE
SCALELESS—RUSTLESS
SMOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO



Supplementary Spiral Springs

Provide SPRING INSURANCE and SPRING COMFORT.

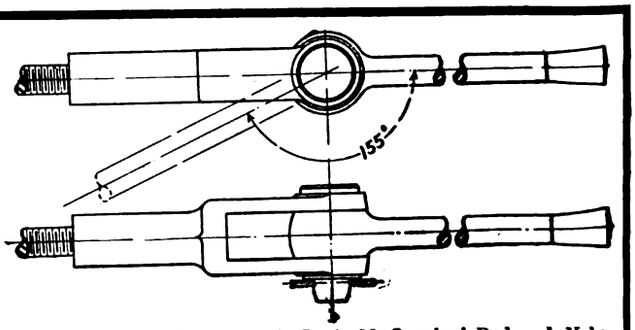
Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

Let us send you our interesting booklet, and ask your dealer about them.

SUPPLEMENTARY SPIRAL SPRING CO.,
4555 Delmar Avenue, St. Louis, Mo.
New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.

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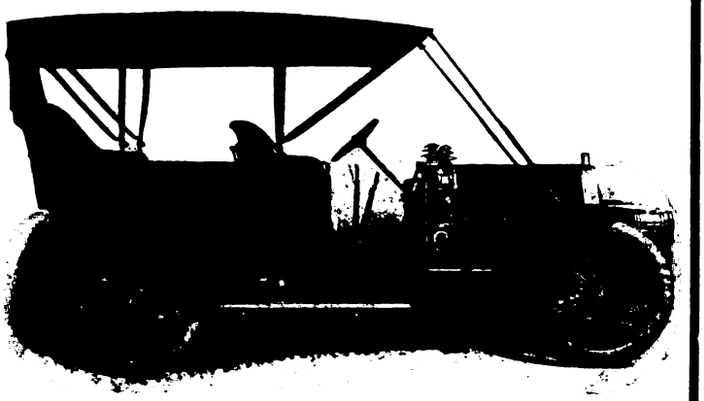
We now have in stock the new A. L. A. M. Standard Rod and Yoke Ends, both the adjustable and plain patterns, either blanks or milled. Send for new circular with full particulars.

THE BILLINGS & SPENCER CO., Hartford, Conn.

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THE "JEWEL 40"

THE "NON-SKIDDING" CAR



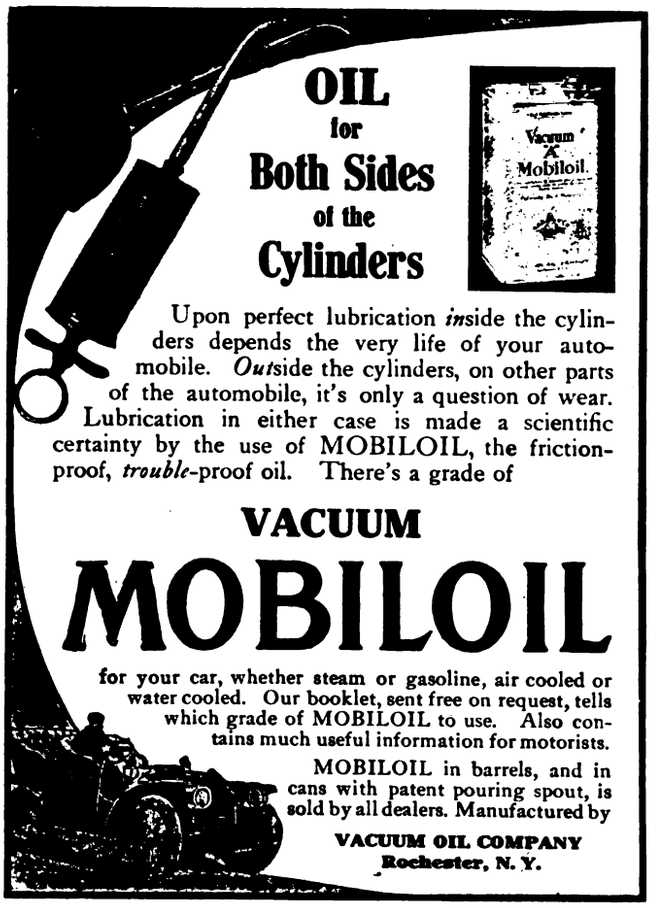
Compare following specifications with other cars at $3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

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234 Walnut Street, - Massillon, Ohio, U. S. A.



OIL for Both Sides of the Cylinders

Upon perfect lubrication *in*side the cylinders depends the very life of your automobile. *Out*side the cylinders, on other parts of the automobile, it's only a question of wear. Lubrication in either case is made a scientific certainty by the use of MOBILOIL, the friction-proof, *trouble*-proof oil. There's a grade of

VACUUM

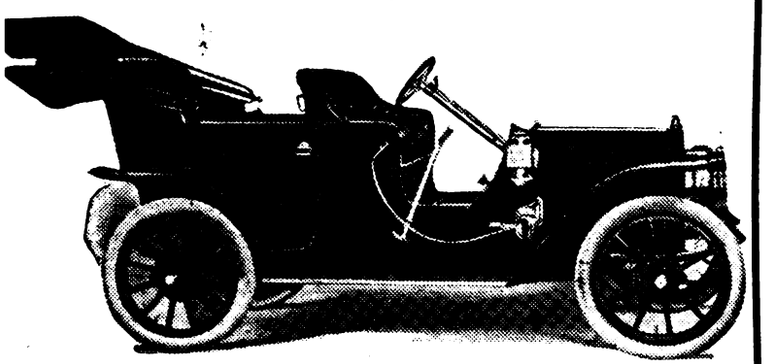
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for your car, whether steam or gasoline, air cooled or water cooled. Our booklet, sent free on request, tells which grade of MOBILOIL to use. Also contains much useful information for motorists.

MOBILOIL in barrels, and in cans with patent pouring spout, is sold by all dealers. Manufactured by

VACUUM OIL COMPANY
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OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

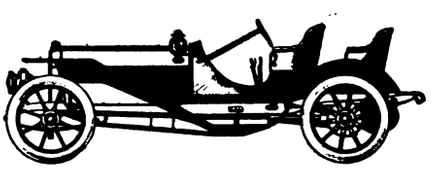
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No. 18 **Palmer-Singer Six-Fifty. Racing Car 6 Cylinder, 60 H. P. $2,450**

Palmer-Singer Four-Thirty Skimabout 4 Cylinder, 28-30 H. P. $1,950

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Palmer-Singer Four-Forty Seven-Passenger Touring Car 40 H. P. $4,000



Palmer-Singer Town and Country Car 28-30 H. P. $3,000

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The Sixty-Six is a touring runabout capable of record-breaking speed and still of carrying three or more passengers with perfect comfort on long and hard runs. It will far outdistance and outwear any car of its class at even $2,000 more in price.

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Sole Distributors the SIMPLEX

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Empire Tires
WEAR LONGEST

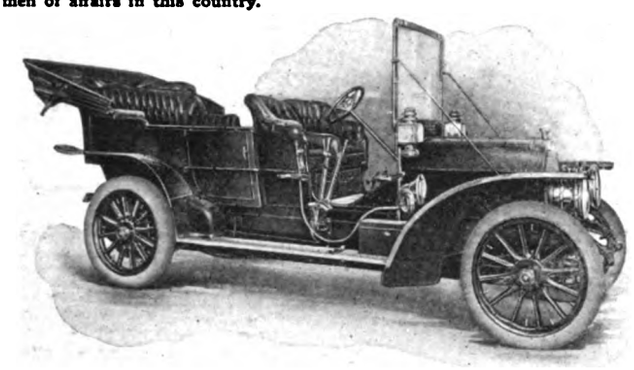
EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

Matheson

ONE YEAR GUARANTY

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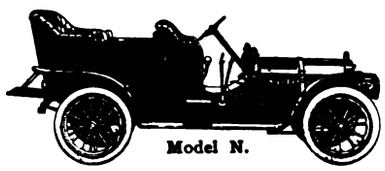
Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

National
Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with **Ball Bearings throughout, including the motor.**



Model N.

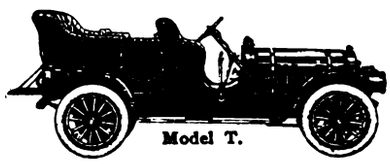
Model K—4 cyl., 4⅞ x 5
$3,500

Model N—4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½x4¾
$4,200

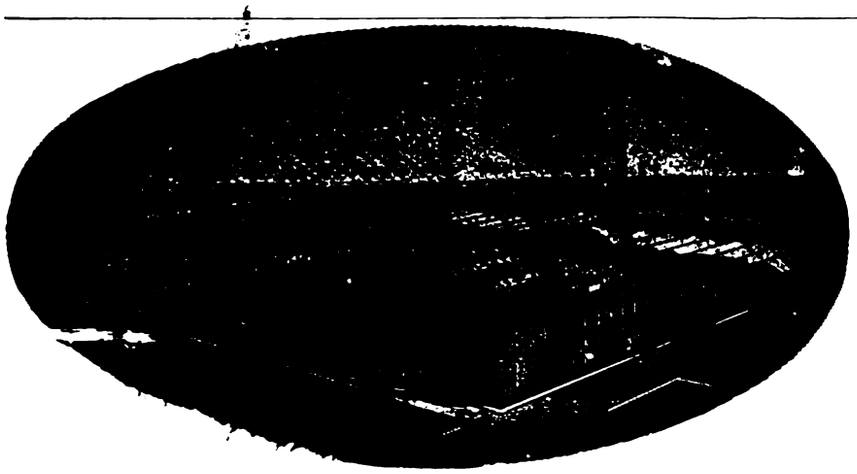
Model T—6 cyl., 5 x 5
$5,000



Model T.

Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.
1007 E. 22d Street INDIANAPOLIS, IND.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.
L. S. & M. S. Ry. & Edgwater Park
CLEVELAND, OHIO, U. S. A.

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AJAX
WRAPPED TREAD TIRES

IF
a man's word
is
as good as his bond,
then
he ought to be willing
to give you
the bond.

There's only one
maker
of pneumatic tires
who
is willing and does
give his bond
to back up his claims.

That's us—makers of
AJAX Wrapped Tread
Tires.

Every AJAX Tire
sold
is accompanied
by a written Guarantee
for 5,000 miles.

We give you
our word
for AJAX quality—
our bond
for actual service.

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Foctories: Trenton, N. J.
BRANCHES:
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Boston, 819-a Boylston St. — Seattle, 1102 Broadway
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Agents in all large cities.

THE INCOMPARABLE
WHITE
THE CAR FOR SERVICE



New San Francisco-Los Angeles Record.

A 30 horsepower White Steamer, carrying four passengers, set up a new record from San Francisco to Los Angeles on April 28th, 1908, covering the 478-mile mountainous journey in 17 hours and 17 minutes, thus cutting 56 minutes from the former record which had stood for nearly two years. Furthermore, the record-breaking White was at once driven back over the road to San Francisco in 19 hours and 43 minutes, thus establishing a round trip record of 37 hours.

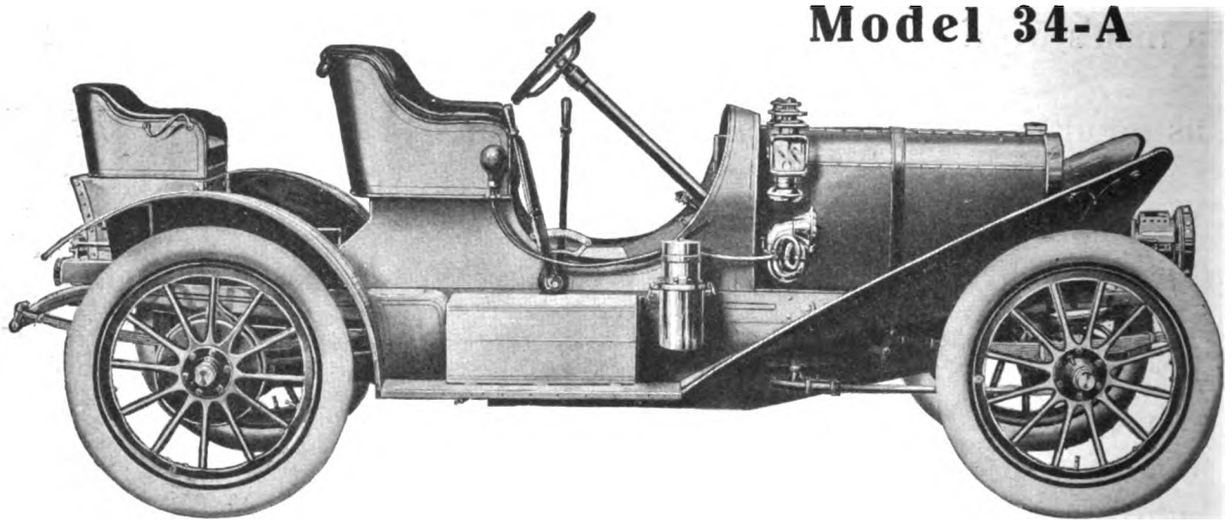
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THE WHITE COMPANY
CLEVELAND, OHIO

New York City, Broadway at 62d St. — Boston, 320 Newbury St.
San Francisco, 1460 Market St. — Chicago, 240 Michigan Ave.
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Rambler



Price, $2,250, Other Models from $1,000 to $2,350

HOW OUR FACTORY SAVES YOU MONEY

A PERFECT factory organization and quantity production, with a consequent saving in cost of materials and making, has enabled us to build this speedy and classy roadster with the power and endurance of a touring car and the convenience of a runabout—to sell at $2,250.

We want you to compare this Rambler with any car on the market, even those selling at twice the price. You will see why you do not have to pay any more to get the best.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, June 11, 1908. No. 11

DATES FIXED FOR GARDEN SHOW

To Be Held in January—Old Committee in Charge—Architects and Decorators Already at Work.

As was expected, the week January 16-23 has been selected as the dates for the Licensed Association's 1909 show in Madison Square Garden, New York. The "independent" show in Grand Central Palace will have closed on the 7th of that month.

The choice of dates was made at a meeting of the A. L. A. M. in New York on Thursday last, at which these members were present:

J. S. Clarke, Marcus I. Brock, Autocar Co.; W. C. Leland, Cadillac Motor Car Co.; M. S. Hart, Corbin Motor Vehicle Corp.; J. H. Becker, Elmore Mfg. Co.; H. H. Franklin, G. H. Stillwell, A. T. Brown, A. E. Parsons, H. H. Franklin Mfg. Co.; E. Hewitt, Hewitt Motor Co.; A. N. Mayo, Knox Automobile Co.; S. T. Davis, Jr., Locomobile Co. of America; H. Lozier, Lozier Motor Co.; William E. Metzger, Northern Motor Car Co.; F. L. Smith, Olds Motor Works; H. B. Joy, Packard Motor Car Co.; C. Clifton, George N. Pierce Co.; A. L. Pope, Pope Motor Car Co.; George Pope, Pope Mfg. Co.; E. D. Shurmer, Royal Motor Car Co.; G. E. Mitchell, Alden Sampson, 2d; R. H. Salmons, Selden Motor Vehicle Co.; E. McEwen, F. B. Stearns Co.; C. C. Hildebrand, Stevens-Duryea Co.; E. S. Church, Waltham Mfg. Co.; Thos. Henderson, Winton Motor Carriage Co.

The old show committee was re-elected, viz.: Col. George Pope, chairman; Marcus I. Brock and M. L. Downs, secretary. Architects and decorators already are at work on the decorative scheme, which it is probable will be ready early next month.

Spare Wheel of America Reorganizes.

Largely as a result of a visit of two of the English directors of the concern, the sales department of the Spare Wheel Motor Co. of America, Ltd., in Chicago, has been completely reorganized and additional facilities have ben installed in the factory at St. Anne, Ill. All of the men who represent the company in Chicago were released and the management of the sales department turned over to George S. Morrow, who previously had had to do with the Spare Wheel in trests in New York. The company, which controls the Stepney wheel in America, likewise has removed its headquarters from the third floor of a Chicago office building and is now located in a commodious street floor salesroom at 236 Michigan avenue, where the public better can be interested and its spare wheel practically demonstrated. The injunction suit which had been brought against an alleged violator of the Stepney patent is being pressed for a quick decision.

Prest-O-Lite has Another Explosion.

For the third time within less than a year the Prest-O-Lite company's plant in Indianapolis, Ind., was badly damaged by an explosion on Saturday, 6th inst. The previous ones were at the old plant in South East street, the latest occurring at a new plant at 211 East South street. It was in reality a series of explosions, the first, for which no cause has been determined as yet, being followed by others resulting from the fire caused by the first. St. Vincent's Infirmary, located nearby, was somewhat damaged, and a city fire house was wrecked. The total loss is estimated at $10,000. The company has under construction still another plant in a more sparsely built up section, to which it purposed removing all the business of charging when completed.

New Reliance Company Succeeds Old One.

The Reliance Motor Truck Co., just incorporated in Michigan with a capital of $250,000, has taken over the business of the Detroit company of the same name. It will locate in Owosso. The officers of the company are: President, Fred O. Paige, Detroit; vice-president, A. M. Bentley, Owosso; secretary-treasurer, W. F. Benkelman, Owosso.

ROYALTY REDUCED 20 PER CENT.

Courts Authorize Revised Agreement with Selden Licensees—Limitation Placed Upon Yearly Maximum.

Despite the opposition brought to bear by those who dearly would love to bring about the embarrassment of anyone or anything interested in the Selden patent, the United States Circuit Court for the New Jersey District, last week granted the application of the receivers of the Electric Vehicle Co. for permission to reduce the amount of royalty heretofore exacted of the holders of Selden licenses. Following the decision of the Federal Court, the Superior Court of Connecticut promptly extended its approval of the plan.

The facts that all the licensees are included in the Association of Licensed Automobile Manufacturers and that all save two of them had refused to make overdue payments, alleging that the amount of royalty imposed was "excessive and oppressive," induced several imaginations to discern in the situation the early disruption of the A. L. A. M. Of this, however, there was not at any time any likelihood.

Under the existing agreement, the licensees are obligated to pay 1¼ per cent. of the catalog price of all vehicles they produce, except such as may be exported, on which the royalty is ¼ per cent. Payments are required to be made quarterly, a discount of 20 per cent. being allowed for payments within 15 days, thus making the net royalty 1 per cent.

The revised agreement, which just has been authorized by the courts, will reduce the royalties of the licensees by 20 per cent., with the further limitation that the maximum royalties to be paid in any one year shall not exceed $250,000. It also will provide that should a decree be entered adjudging the Selden patent invalid, the royalties shall, pending an appeal from that decision, be paid to the trustee to await the

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outcome of the appeal. In addition, certain modifications of the terms upon which new members to the Association may be admitted, and surrenders to the Association control of litigation to compel payments of royalties in excess of the maximum annual amount of $250,000 above referred to. The "terms for new members" are understood to be a matter of phraseology.

In substance, the new agreement means that henceforth the total revenue in royalties from the Selden patent will not exceed the sum of $250,000 annually. The 20 per cent. reduction in the royalty will bring the proportion from 1¼ to 1 per cent., which, less the 20 per cent. offered for cash 15 days, will make the net royalty 8-10 of 1 per cent. There will be no change in the basis of division between the Electric Vehicle Co. and the A. L. A. M. As at present, the former will retain three-fifths and pay to the association the remaining two-fifths. On this basis, if the maximum amount, $250,000, is reached, the Electric Vehicle interests will receive $150,000 and the A. L. A. M. $100,000.

Dealers' Complaints to be Investigated.

After a meeing of the directors of the National Association of Automobile Dealers, held in Chicago last week, it was officially given out that there were taken up "complaints from members in various parts of the country about the methods employed by some of the jobbers and certain tire makers and automobile manufacturers in disposing of their product. The secretary was instructed to inquire into the circumstances surrounding the matters complained of and to communicate with the various firms and try to adjust these matters to the satisfaction of the complaining members, and if possible in a manner that will prove of lasting benfit to both sides."

Cabs and Motorcycles at Palace Show.

Taximeter cabs and motorcycles both will be featured by the American Motor Car Manufacturers Association at its show in Grand Central Palace, New York, December 31-January 7. Special sections will be set apart for the display of each type of vehicle. It is probable that the same idea will be carried out at the Association's show in Chicago, to select the building and complete the arrangements for which General Manager Reeves now is in that city.

Kitto-Pugh Litigation Reaches Last Suit.

W. H. Kitto, who was secretary of the defunct Motor Components Mfg. Co., of Des Moines, Iowa, has made a settlement with A. D. Pugh, who sued him for $1,000 for attorney's fees. By a payment of $500 he secured dismissal of the suit. There yet remains of the batch of suits and countersuits between the two men Kitto's suit against Pugh for $10,000 damages, based on Pugh's alleged "queering" of Kitto in other transactions.

The Week's Incorporations.

Chicago, Ill.—Swinehart Clincher Tire & Rubber Co., under Illinois laws, with $200,000 capital; Ohio corporation dealing in rubber tires.

Rockport, Mass.—Lands End Motor Co., under Massachusetts laws, with $10,000 capital. Corporators—C. Burton Martin, Arthur Fairweather, Anne McCarthy.

Greenfield, Mass.—Reliance Motor Bus Co., under Massachusetts laws, with $10,000 capital. Corporators—George H. Wright, Charles G. Bascom, Winnie L. Bascom.

Boston, Mass.—Supplementary Spiral Spring Co., under Massachusetts laws with $10,000 capital. Corporators—Henry D. Crowley, Mary E. Lucey, Anne E. McGrail.

Indianapolis, Ind.—Commercial Motor Vehicle Co., under Indiana laws, with $10,000 capital. Corporators—Carl Moller, William H. Thomas, Otto M. Moller, L. H. Adams.

East Orange, N. J.—Atlantic Motor Car Co., of New Jersey, under New Jersey laws, with $12,000 capital; to deal in automobiles. Corporators—C. O. Geyer, F. C. Ferguson, F. E. Ruggles.

New York, N. Y.—Fox Metallic Tire Belt Co., under New York laws, with $100,000 capital; to manufacture automobiles, etc. Corporators—W. A. Malone, A. E. Smith, W. H. Klock, New York City, N. Y.

New York City, N. Y.—Empire Taxi-Motor Cab Co., under New York laws, with $10,000 capital. Corporators—James S. McLean, Arthur A. Ernst, Edward R. Wells, 437 Fifth avenue, New York City, N. Y.

Buffalo, N. Y.—Pioneer Spring Hub Co., under New York laws, with $100,000 capital; to manufacture spring hubs for automobiles, etc. Corporators—W. A. Hyde, Syracuse, N. Y.; G. H. Ismon, G. L. Lerch, Buffalo, N. Y.

New York City, N. Y.—Vulcan Storage Battery Co., under New York laws, with $25,000 capital. Corporators—Franz Sigel, Charles E. Lansing, 38 Park Row, New York City, N. Y.; William Knobloch, Williamsbridge, N. Y.

New York City, N. Y.—Northern Chemical Co., under New York laws, with $25,000 capital; to manufacture dust allayer known as "florozone." Corporators—E. J. Magen, H. Roth, New York City, N. Y.; L. E. Stubenvoll, Jersey City, N. J.

New York City, N. Y.—Cedarhurst Motor Livery Co., under New York laws, with $10,000 capital. Corporators—Peter T. Radiker, Nellie F. P. Radiker, 159 West Eighty-seventh street; Mary C. Pease, 269 West Eighty-fourth street, New York City, N. Y.

In the Retail World.

D. D. Baskerville is to open a new garage in Madison Wis., and will handle the Mitchell cars.

The Moon Sales Co., which will handle the Moon car in New York, has located at 2182 Broadway.

S. L. Patton and W. H. Miller, of Oklahoma City have opened a garage at Ranch Creek in that State.

The Bond Motor Car Co., Bradford, Pa., are making ready to erect a new garage; the plans therefor already are in the contractor's hands.

The Orange Garage Co., Orange, N. J., are building a new garage. It is claimed that when completed it will be one of the finest in the State.

The Wheeling (W. Va.) Automobile Co. has been discharged from bankruptcy. The concern got into difficulties several months ago, but has succeeded in weathering the storm.

Work has started on the new garage for the Orange Auto Co., in Main street, East Orange, N. J. The building will be of brick one story high, with a frontage of 40 feet and a depth of 175 feet.

Creditors of H. W. Berthiaume, a San Francisco dealer, have filed a petition to have him adjudged bankrupt. The petitioners are the Boyer Motor Car Co., H. W. Bogen, Inc., Cuyler & Co., and the Weinstock-Nichols Co. Their claims aggregate $1,061.

The Columbia Garage, Spokane, Wash., will remove to the old National Iron Works property in that city. Plans are under consideration for the erection of a brick annex, 60x80 feet, to be used as a garage, the old building to be used as a machine and repair shop.

The partnership of Williams & Crafvy, which has been operating in Worcester, Mass., as the Worcester Motor Car Co., has dissolved, Williams having purchased the interests of Crafvy. Williams will continue the business under the old name and will handle the Franklin line of cars exclusively.

Phelps Brown, who hitherto has been in the newspaper business, has purchased an interest in the Indianapolis Motor Car Co., of Indianapolis, Ind. He will become the company's "financial agent." His associates in the company are Alfred Markham, who holds the office of president, and Paul Smith, who is secretary-treasurer.

The Pendleton Automobile Co. Franklin, agents at Pendleton, Ore., are building a fine new garage, 90 by 100 feet. This is to be equipped with first-class machinery and will be one of the finest garages in the northwest. It is asserted that the State of Washington contains more Franklins than any two other makes, 186 being in use there.

Charles A. Haskin has taken over the interests of his two partners in the W. A. Frederics Co., Boston, Mass., and the business has been incorporated under Massachusetts laws as the American Automobile Co., capitalized at $60,000. Haskin is president and general manager, with Edwin C. Hayden as vice-president, B. R. Dorman, treasurer, and W. A. Webber, secretary.

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POPE RECEIVERS RENDER REPORT

Some Interesting Figures Brought Out in Petition for Further Authority—Huge Claim Against Pope-Toledo.

The report of the receivers of the Pope Mfg. Co., which accompanied their petition to the Chancery Court of New Jersey for permission to continue the business, proves to be an interesting document.

It discloses, among other things, that in addition to the claim for $787,987.84 filed against the Pope Motor Car Co., Toledo, Ohio, there is standing against the latter concern on the Pope Mfg. Co.'s books a debit of $1,000,000. The smaller amount, for which a claim has been legally filed, is for "moneys paid out for and advanced to the Pope Motor Car Co."; the round million is for a dividend declared by the latter company and later rescinded by its board of directors. No claim has been filed for the million dollars, but the time within which such a claim may be lodged with the courts does not expire until Monday next, 15th inst. There is no intimation, however, that such action will be taken.

The receivers report that they have made and disposed of 500 Pope-Hartford cars, and the operations at the Hartford factory since the appointment of receivers up to May 1st, 1908, have resulted in a net profit of approximately $215,890.20, and the profits for the year ending July 31st, 1908, have been estimated at the sum of $405,022.80.

Up to May 1st the Pope company's Westfield (Mass.) bicycle factory has earned a net profit of approximately $35.797.49, which it is believed will be increased to $69,399.47 by July 31st next. The Hagerstown (Md.) plant, which is used chiefly for building the Pope jobbing bicycles, had been carried on at a net profit of $17,546.85 up to May 1st.

On May 19th last, there was in the possession of the receivers apointed by the New Jersey court or by the ancillary courts in the various respective districts the following sums:

New Jersey	$405,041.70
Connecticut	338,061.22
Massachusetts (not including Internat'l Trust Co. $9,407.49)	54.530.12
Maryland	89,481.68
New York	4,135.06
Illinois	24,312.36

The receivers in all jurisdictions had on May 19, 1908, outstanding and uncollected:

Connecticut	$138,293.29
Massachusetts	119,484.42
Maryland	67,862.59
Illinois	7,416.91
New Jersey	24,607.27
	$357,664.48

In applying for permission to continue the business and to make plans and purchases for next season, the receivers recommend that they be authorized to manufacture 700 Pope-Hartford 1909 models and 50,000 bicycles. As stated in the Motor World last week, the hearing on their petition will be held June 17th.

Rogers Arranging the Mitchell "Jubilee."

G. Vernor Rogers, secretary of the Mitchell Motor Car Co., left for the Pacific Coast this week to complete the arrangements for the second annual jubilee of Mitchell owners, which will take place in and about San Jose, Cal., July 3d and 4th. It is expected to prove the largest gathering of owners of a particular brand of cars that ever has occurred.

The affair will open on July 3d, with the annual hill climb, the prizes for which will range from silver cups to luncheon outfits and clocks. Timing will be by telephone and the first car will be sent away at 3 o'clock in the afternoon. The next day the party will leave San Jose for Del Monte, taking luncheon there at 2.30 in the afternoon. Club house privileges will be accorded the visitors. The Del Monte Hotel management has offered special prizes for a time limit run around the 17 miles drive.

British Imports and Exports.

British imports of foreign cars and parts during the month of April fell away no less than $716,725 as compared with the returns for the corresponding period of last year. Only 480 complete cars were imported, which together with the 228 chassis and parts to the value of $610,680, brought the total importation to $1,920,7 5, as against a total of $2,637,490 last year, and $2,016,145 for April, 1906. The business of exporting British products to foreign ports revealed a small gain. There were exported 168 cars, valued together at $291,-230; 18 chassis, valued at $37,365, and parts to the value of $163,260, making a total of $491.855 a $30,000 gain over last year.

Big Wheat Crop Makes Brisk Business.

"Whatever may be the case in other parts of the country," one day this week remarked a man in the trade, who is in position to speak by the cards, "business in that part of the United States that lies between Chicago and Denver is as good as any one can ask; and when I say 'business,' I mean not merely the bicycle business, but business of all sorts. The farmers have money and are spending it, and, as the official statistics show the wheat crop as being one of the largest on record, there seems no reason why the present conditions should not continue."

Southern California Dealers Elect Officers.

Without opposition the following officers were elected by the Automobile Dealers' Association of Southern California: President, William E. Bush; vice-president, R. C. Hamlin; secretary, H. O. Harrison; treasurer, Captain H. D. Ryus. The retiring secretary's report showed that $1,181 remained in the treasury at the close of the fiscal year.

SUMMER MEETING OF ENGINEERS

Program of Business and Pleasure at Detroit—Who Will Speak and What Will be Discussed.

Preparations for the annual summer meeting of the Society of Automobile Engineers, which will be held in Detroit, June 25-27, are now complete, and the program prepared by the special Detroit entertainment committee gives promise of one of the most interesting gatherings that the Society has ever had. The meeting will be opened Thursday a. m., June 25, with a business session of the Society, followed by attendance at the launching of a 10,000-ton lake steamer in conjunction with the American Society of Mechanical Engineers. One of the local plants will be inspected in the afternoon of that day, and in the evening papers on "Autogenous Welding," by E. S. Foljambe, and "The Storage Battery in Automobile Work," by Bruce Ford, will be read.

Friday morning the members will join in the continued discussion of the paper on "Clutches," by Henry Souther, at the session of the A. S. M. E., and in the afternoon a trip will be taken up the St. Clair in a steamer. In the evening a dinner will be held, and it will be followed by the reading of a paper on "Some Recent Developments in Magneto Ignition," by Otto Heins; a number of lantern slides, showing the development of the gas engine ignition during the past 25 years, will be shown.

Saturday morning the plant of the Packard company will be visited, followed by a luncheon tendered the society at the Detroit Boat Club by J. G. Rumney, of the Detroit Steel Products Co., and there will be an automobile run through Belle Isle Park and environs during the afternoon. In the evening there will be a business session, followed by the reading of papers on "The Unit System of Power Transmission," by Frank Beemer, and "The Increased Efficiency of Single Motor Drive," by A. L. Dixon.

The Detroit committee of arrangements is composed of H. E. Coffin, chairman, Henry Ford, Russell Huff, James H. Herron, and Alanson P. Brush.

Two Big Companies May Consolidate.

What has been known for several weeks to many persons in the trade finally has found its way into print, i. e., a mooted consolidation of the Buick and Maxwell-Briscoe companies. Some reports state that the deal practically has been completed, but those most interested deny these statements. Before mestion of the matter appeared in print, Benjamin Briscoe, while admitting that negotiations were in progress, stated that any mention of the subject would not be relished.

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There's only one way out of it—you cannot "protect" against the puncture devil, even by overloading your wheels with heavy armor which destroy the resiliency of your tires.

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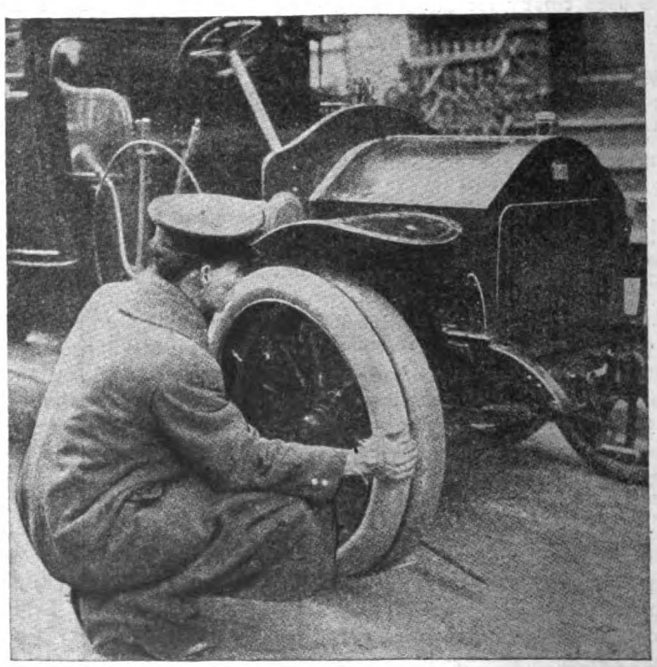
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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 11, 1908.

Beware of the Cheap Inner Tube!

One of several factors that brought discomfiture to the bicycle industry and which caused, and still is causing, much annoyance to riders, was the tire built for sale rather than for use. And what has been, and to a limited extent now is, true, of the bicycle business, is becoming evident in the automobile trade. While reputable tire manufacturers take pride in their product and have their name and trade mark appear prominently on every article which they produce, the maker of another grade of goods has no such feeling toward his output and sends forth his production with neither name nor sign to designate its "birthplace."

The nameless tire seemingly has one attraction, its price. But it is a fleeting attraction; for cheap tires, like other cheap wares, are the most expensive in the end, and "the end" is not for off. Fortunately for bargain hunters, not much has been done by unknown concerns in the matter of making outer shoes or casings, but of late there have been numerous outcroppings of unbranded and nondescript inner tubes. With neither name, number, nor distinguishing mark, and without reputation or with an unmeaning guarantee, they are offered to automobilists "at a price." They were produced for no other purpose.

It is recognized that the life of a tire is affected by the heat to which use subjects it. In the hot days of summer the heat of the pavement adds much to the heat generated by the compression of the air contained in the tire, and the cheap production of second hand rubber will stand but little of this strain before it becomes an annoyance and source of continual trouble. Undoubtedly, the nondescript inner tube will this summer cause much trouble for which the maker of the casing will be damned, and whether the latter will not be justified in taking measures to protect himself is a pretty question, the answer to which inclines strongly toward an affirmative. The reputable manufacturer of a high class casing has a right to expect that it will not be used in connection with a cheap tube; for in many respects the quality of the tube is quite as important as the quality of the remainder of the tire.

Advance of Moderate Powers and Prices.

An inevitable consequence of the vast development which has come over the industry is the stratification of the market into sections or groups of vehicles each of which is characterized by qualities answering to the needs of a specific class of users. Viewed in this light it is possible to discern a growth in favor on the part of the car of medium power and medium price which would be simply amazing were its causes not distinctly apparent.

How rapid this growth is, may not become readily appreciable until the end of this season, or even later. But the relative volume of business done in cars of say, 20 to 30 horsepower, and costing somewhere about $2,000, is a token which has not been lost on the makers. A large number of such cars are already on the market, and their popularity, as a class, is unquestionable. Still others are in process of construction, however, which are destined to create no small stir when their features and their origin are announced.

While the moderate priced car always has been pre-eminently the American product, such a movement in the foreign market last year and this, resulted in the production of a great number of such cars, by makers who up to that time had been identified only with the most exclusive and costliest vehicles. Their success may be taken as a forecast of the extension here by makers of the same class.

The crux of the matter is this: The motorist, instead of the maker, is beginning to dominate the market. He is learning to demand what he wants, even as he has learned his requirements—in a positive fashion that is not to be gainsaid. The value of display, of luxurious fittings and high power are being contrasted with the actual enjoyment which may be derived from them. The individual buyer is learning that certain types of machine are as unfit for him personally as they may be appropriate to others. Users are beginning to buy cars strictly within their means.

Special Performances and Their Effect.

Buyers of new cars, in their enthusiasm and confidence are largely in a class by themselves. Usually their faith in the recent acquisition is unbounded, their credulity as to its powers childlike, and their dejection when it fails to come up to their fullest expectations pathetic. For it frequently happens that new cars do not develop as well as they are expected to, and though a large amount of such failure may be charged to the poor adjustment and stiffness of new mechanism, there are several other causes which lead to the same result and which breed discontent for the owner as well as unhappiness for the agent with whom he deals.

Perhaps the most moving cause instrumental in undermining the new owner's opinion of his new machine is the purely human one best expressed in the ancient text for lyceum debate beginning: "The pleasures of anticipation——" and setting forth how the apple does not always taste as good as it looks. The wholly natural shortcomings of the new mechanism are more momentous when it has been in use just long enough to have grown familiar, than when a longer acquaintance has made clear their causes.

Another reason for discontent is the contrast drawn between the performance developed by the demonstrating car when on trial, and the performance developed by the private machine when driven by its owner,

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not to mention the contrast between the demonstrator's stories of what can be done with it, and the facts as they appear to the buyer. The invariable tendency is not to make proper allowance for the splendid performance of the specially tuned demonstrating machine in expert hands, and to be over-credulous in accepting the recommendations of the salesman or driver, whose eagerness to succeed and whose partiality to the machine in question offer a strong temptation to the tracing of nebulous rainbows.

In all this, the wise dealer may find food for thought. The time has passed when the salesman of integrity will permit a machine to go into the hands of a driver who is not familiar with at least the rudiments of good driving and car maintenance. Many dealers go far beyond the actual requirements of the case by insisting upon overlooking the training of the owner and supervising the early performance of the machine, merely for the purpose of ensuring for it a creditable performance. And it is a particularly hopeful sign that the proportion of dealers of this class is especially great among those who handle low and medium priced cars.

Nevertheless in many cases the new owner is encouraged in establishing an exorbitant valuation on the ability of the machine. The desire to excel in sales business produces a strong temptation to the use of the spectacular in demonstration and publicity work, and while the dealer, or the manufacturer himself, may have no intention of producing the impression that the car will thrive under such treatment, or will give such results under any sort of handling, such an impression is apt to be fostered by an over-zealous method.

The maker with the reputation—the maker who succeeds—and the agent who succeeds, are the hard headed business men who so contrive as to crystalize first impressions into lasting impressions, and to make the performance realized even more gratifying than the performance anticipated. It is a difficult undertaking. But it is possible to enumerate more than one growing business of which this is a characteristic.

Tinkering that Injures Reputations.

It is a queer phase of human nature that prompts a man, who would not permit of anyone but a first class jeweler resetting a stone in his wife's ring, to allow his chauffeur, or his mechanic—if he employs one—to make alterations in the running mechanism or power plant of an equally or more expensive automobile; and yet how often is this done.

While it stands to reason that the mechanism of a car must be considered in its entirety, i. e., that each part is closely related to every other part, and while any one with a grain of sense must realize that manufacturers and designers have as many or greater opportunities than private chauffeurs or mechanics for observing and studying the designs and ideas embodied in other cars, yet owners will permit alterations to be made or devices incorporated by their own employes, until frequently it is true that a well built, efficient car acts like a mule or becomes much like a junk wagon.

Often where a transmission case is designed to be lubricated by heavy oil, the chauffeur finds that, for personal reasons, he would prefer to use grease. The owner listens to the arguments in favor of the latter, which his employe advances, and then gives his consent for such alterations as may be necessary—or thought to be necessary. The transmission case is taken apart, oil screens are removed, large holes are drilled here and there, grease cups are substituted, and almost radical alterations are made. Like as not a grease reservoir becomes a part of the dashboard equipment and a pipe from it is run through the flooring and around the levers until finally it terminates in a coupling and bushing which goes into the transmission case; and what was a simple lubricating system thus becomes a complicated series of piping, grease cups and what-not. And merely because the chauffeur recommended it.

Obviously when a car has gone through any such alteration, the manufacturer's responsibility for its performance ceases. The car has been guaranteed to do certain things but the guarantee applies only if the mechanical construction remains intact. It is not to be expected that any manufacturer will shoulder the responsibility for the acts of an independent mechanic and naturally he will not assume the blame nor claim the credit for a car which has undergone radical alterations after it has left his control.

It is safe to assume that the way to obtain the best results from any article is to leave well enough alone. So called "improvements" seldom improve. It is rare that the chauffeur or chauffeur-mechanic can improve on the mechanical design of one whose life work is designing.

If a car does not suit, buy one which does, but do not attempt to make over one to accomplish the purposes of some other, and above all things, don't let a chauffeur have free rein to make "improvements" until the maker of the car has expressed an opinion as to whether or not the proposed changes will prove beneficial. Chauffeurs have a fiendish inclination for "tinkering," and "tinkeritis" has become the mainstay of many repairmen who live by undoing the mistakes of would-be "experts."

COMING EVENTS

June 13, Cleveland, Ohio—Cleveland Automobile Club's annual hill climb.

June 13, Philadelphia, Pa.—Quaker City Motor Club's race meet at Point Breeze track.

June 13, Cleveland, Ohio.—Cleveland Automobile Club's hill climbing contest up Cady hill.

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 20, Oakland, Cal.—California Woman's Automobile Club's endurance run to San Jose and return.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrimac boulevard.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

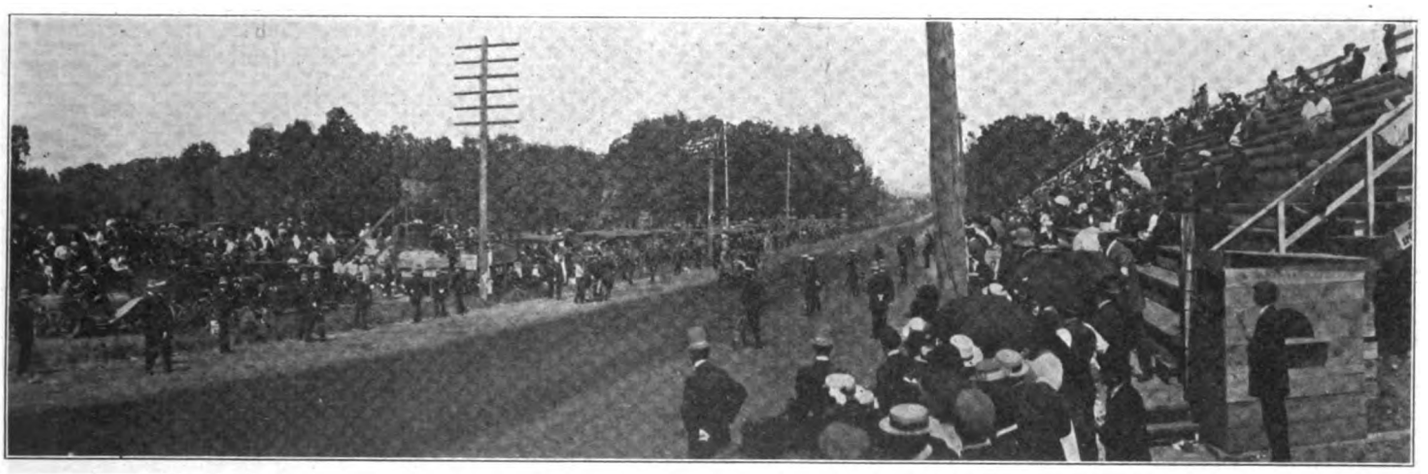
December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

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AMERICAN ROAD RECORDS SLASHED

Twenty-six Fast Events on Straightaway Course at Jamaica—Big Day's Sport Without Hitch or Accident.

Everybody from Queens, a number of persons from Kings, and some from other counties journeyed out to what is known as Hillside avenue, near Jamaica, Long Island, on Friday, 5th inst., to witness the straightaway speed trials. Thousands of spectators lined the course, the grandstands at the finish were comfortably filled, while hundreds of cars parked in good positions along the smooth level boulevard.



TYPICAL VIEW OF THE COURSE AT JAMAICA, SHOWING A SPEED TRIAL.

It was "automobile day" of the subway celebration that Jamaicans have been holding, and in the excitement of watching the automobiles fly over a stretch of road at much better than a mile a minute, the side show features of the celebration, such as wild west shows, baseball games and balloon ascensions, were entirely ignored.

With no less than 26 events on the program it is not surprising that the meet lasted until after some persons' supper hour, but at that the events were run with better dispatch than was thought possible and almost every car came in for honors. One might naturally suppose that in a meet of this character the most attention would be given to the big racing cars, but such did not seem to be the case. After several stock cars covered the different stretches at rates of speed better than a mile a minute the crowd began to focus its attention upon the stock cars, and the drivers of this class machines received just as much applause after a record-breaking run as did the pilots of the mastodons.

The policing and official arrangements were excellent and there was not a hitch from start to finish. The police made it impossible for the crowds to encroach upon the course and there was no long waiting for the announcement of times. The timing was done automatically and the performance of each car was announced within five seconds of the time it flashed by the red flags denoting the finish tape.

The twenty-six events were run at three distances—one kilometre, one mile and two miles—with several classes at each distance. All American road records were broken. Harry Kilpatrick, driving the Vanderbilt cup race Hotchkiss car, made the fastest times of the afternoon. In the kilometre trials he scored 24⅗ seconds in the free-for-all, a rate of 90 miles an hour. In this event Morton Seymour in the Christie car finished second in 26⅗ seconds. While practicing the day before Seymour had broken the radiator off the Christie car and it could not be replaced in time for the meet. As the result Seymour was afraid to go farther than one kilometre because of the danger of overheating. Kilpatrick covered the mile in 38⅗ seconds, a rate of 93.3 miles an hour, and in the two miles trials his time was 1:19⅕. The special event for the Jefferson DeMont Thompson cup, at two miles, also was won by Kilpatrick in 1:20⅕. In the one mile free-for-all George Robertson in a Fiat was the runner-up, finishing in the same position in the two miles event. John Lang, Isotta, was second in the race for the Thompson cup.

Mitchell cars had things their own way in the classes for cars under $1,250, O. R. Delamater winning all three events at the various distances. C. P. Skinner, Mitchell, was the runner-up in two of the events. An Acme car, driven by C. A. Patchske, did the same stunt in the class for cars selling between $1,251 and $2,000, while Leonard Zengle, Pennsylvania, made the best time at the three distances when the class for cars from $2,000 to $3,000 was decided.

Honors were divided in the class for cars costing between $3,001 and $4,000. In the kilometre trials W. A. Woods, Cleveland, beat J. P. McDermott, Stevens-Duryea, by nearly seven seconds, and in the two miles event W. W. Burke, Mora, beat Woods, who in turn finished in better time than McDermott. T. F. Cheesborough, Thomas, won in the mile trials, covering the distance in 57½ seconds. McDermott was second and Woods third.

In the class for four cylinder cars selling above $4,000, Stearns cars made the fastest time in all but the one mile, which was won by Caleb Bragg, De Dietrich, in 51⅗ seconds. The Stearns also won all three of the six cylinder events.

One class that attracted a great deal of attention was that for Briarcliff cars, those with piston displacement of 301 to 550 cubic inches. John Lang, driving a duplicate of the car which won the Savannah challenge trophy and the Briarcliff cup, was victorious three times. He covered the kilometre in 27⅗ seconds, and the mile in 42⅕ seconds, while his time for two miles was 1:29⅕. These figures were equalled only in the free-for-all. The loss of Emmanual Cedrino, who was killed before the Pimlico races in Baltimore, on the Fiat car, was keenly felt. Cedrino had been expected to drive the Fiat in these events, but his place was taken by J. H. Parker. Parker made a good showing, but he could finish only second to Lang each time. J. M. Seymour, on a Simplex, got third place in all three events.

Mitchell cars were the heaviest scorers among the American cars, with the exception of the big Stearns, which competed in more events. Mitchells won three firsts and two seconds, and with five points for a first and three points for second place, it ran up a total of 21 points, as shown in the following table:

Car.	1st	2d	3d	Pts.
Stearns	5	4	2	39
Isotta	4	1	1	24
Mitchell	3	2	0	21
Hotchkiss	4	0	1	21
Fiat	0	6	2	20
Acme	3	0	1	16
Pennsylvania	3	0	0	15
Thomas	1	3	0	14
Cleveland	1	1	1	9
Palmer & Singer	0	3	0	9
Corbin	0	2	1	7
Stevens-Duryea	0	2	1	7
De Dietrich	1	0	1	6
Mora	1	0	0	5
Haynes	0	1	2	5

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Pullman	0	1	1	4
Pope-Hartford	0	0	3	3
Ford	0	0	3	3
Simplex	0	0	3	3
Christie	0	1	0	3
American	0	0	1	1
Jackson	0	0	1	1

5 points for first, 3 points for second, 1 point for third.

One Kilometer.

Gasolene cars under $1,251.

Driver and Car.	Time.
O. R. Delamater, Mitchell	0:43⅕

Gasolene Cars $1,251 to $2,000.

C. A. Patchske, Acme	0:38⅗
W. E. Shuttleworth, Haynes	0:42⅗
K. R. Manzille, Palmer & Singer	0:42⅗
Bob Burman, Jackson	0:44

Gasolene Cars $2,001 to $3,000.

L. Zengle, Pennsylvania	0:34
J. W. Swan, Corbin	0:35⅖
Phil Hines, Pope-Hartford	0:38⅖
Robert Morton, Pullman	0:39⅕
J. A. Kline, Pullman	0:39⅗
Joseph Kenny, Ford	0:44⅗
Wally Owen, Imperial	0:42

Gasolene Cars $3,001 to $4,000.

W. A. Woods, Cleveland	0:35⅘
P. J. McDermott, Stevens-Duryea	0:42

Four-Cylinder Cars Over $4,000.

D. E. Farrell, Stearns	0:33⅕
Arthur Warren, Stearns	0:33⅗
H. Swan, Stearns	0:33⅘
H. Johnson, Mercedes	0:33⅘
James Doig, Stearns	0:34⅖
Caleb Bragg, De Dietrich	0:35

Six-Cylinder Cars Over $4,500.

C. F. Alcott, Stearns	0:28⅘
E. F. Buchanan, Thomas	0:32
J. P. Disbrow, Ford	0:36⅕
S. Carousso, Hotchkiss	0:37⅘

Free-for-all, Any Type or Power

H. Kilpatrick, Hotchkiss	0:24⅗
Morton Seymour, Christie	0:26⅗
George Robertson, Fiat Cyclone	0:30⅘
A. P. Hedrick, Pope-Hartford	0:37

Stock Chassis 301 to 550 Cubic Inches Displacement.

John Lang, Isotta	0:27⅗
J. H. Parker, Fiat	0:28⅘
J. M. Seymour, Simplex	0:32
L. Zengle, Pennsylvania	0:32⅗
A. P. Hedrick, Pope-Hartford	0:36⅕
A. Gentile, Pennsylvania	0:37
H. A. Harkin, Mercedes	0:44

TWO MILES.

Gasolene Cars Under $1,250.

Driver and Car.	Time.	Av.
O. R. Delamater, Mitchell	2:32	47.4
C. P. Skinner, Mitchell	2:41⅘	46.2
F. J. Nolte, Ford	3:33	33.8
R. J. Johnson, Ford	4:16	29.0

Gasolene Cars $1,251 to $2,000.

C. A. Patchske, Acme	2:07	58.2
K. R. Manzille, Palmer & Singer	2:22⅘	50.4
W. E. Shuttleworth, Haynes	2:23	50.4
J. D. Roark, Cadillac	2:27	49.0
Bob Burman, Jackson	2:29	48.2
W. Olney, Mitchell	2:31	47.4

Gasolene Cars $2,001 to $3,000.

L. Zengle, Pennsylvania	1:53	63.7
J. W. Swan, Corbin	1:55⅘	62.1
Robert Morton, Pullman	1:56⅕	61.5
J. A. Kline, Pullman	2:08	56.2
Philip Hines, Pope-Hartford	2:08⅗	56.0
Joseph Kermy, Ford	2:10⅘	55.0
D. D. Holmes, Midland	2:35	46.5
Wally Owen, Imperial	2:58	44.5

Gasolene Cars $3,001 to $4,000.

W. W. Burke, Mora	2:08⅗	56.1
W. A. Woods, Cleveland	2:12	54.5
P. J. McDermott, Stevens-Duryea	2:16	52.9

Four Cylinder Cars Over $4,000.

Halstead Swan, Stearns	1:48	66.6
D. E. Farrell, Stearns	1:49	66.1
Caleb Bragg, De Dietrich	1:51	64.9
H. Johnson, Mercedes	1:54	63.2
James Doig, Stearns	1:55⅕	62.4
Arthur Warren, Stearns	2:09	55.8

Special Class for Thompson Cup

W. Kilpatrick, Hotchkiss	1:20⅕	89.8
John Lang, Isotta	1:28⅘	81.1
J. H. Parker, Fiat	1:34	76.8
Wally Owen, American	1:40⅘	71.8
Ralph De Palma, Allen-Kings.	1:45	68.6
Jack Rutherford, Peerless	1:56⅕	62.0
H. E. Trevor, Mercedes	2:08⅘	56.0

Six Cylinder Cars, Over $2,500.

C. F. Alcott, Stearns	1:36⅘	E4.5
E. F. Buchanan, Thomas	1:49	65.9
C. B. Rogers, Acme	1:52⅖	64.2
Stephen Carousso, Hotchkiss	1:53	63.1
J. P. Disbrow, Ford	2:00⅗	59.7
W. W. Burke, Mora	2:24⅕	49.9

Free-for-all, Any Types and Power.

H. Kilpatrick, Hotchkiss	1:19⅕	90.9
Geo. Robertson, Fiat Cyclone	1:51⅘	64.4
A. P. Hedrick, Pope-Hartford	1:59⅗	60.1

Stock Chassis, 301 to 550 Cubic Inches Displacement.

John Lang, Isotta	1:29⅕	80.7
J. H. Parker, Fiat	1:32⅗	77.6
J. M. Seymour, Simplex	1:44⅗	69.0
A. Gentile, Pennsylvania	1:46⅕	67.5
L. Zengle, Pennsylvania	1:55	62.7
A. L. Hedrick, Pope-Hartford	1:57	61.3

ONE MILE.

Gasolene Cars Under $1,250.

O. R. Delamater, Mitchell	1:16⅕	47.2
C. P. Skinner, Mitchell	1:16⅖	47.1
R. T. Johnston, Ford	1:30⅕	39.9
F. J. Nolte, Ford	Disabled	

Gasolene Cars $1,250 to $2,000.

C. A. Patchske, Acme	1:03⅗	56.6
K. R. Manzille, Palmer & Singer	1:07⅗	53.1
W. E. Shuttleworth, Haynes	1:08	52.9
W. Olney, Mitchell	1:12⅕	49.9
J. D. Rourke, Mitchell	1:12⅗	49.2
Bob Burman, Jackson	Retired	

Gasolene Cars $2,001 to $3,000.

L. Zengle, Pennsylvania	0:55	65.5
R. Morton, Pullman	0:56⅘	63.4
J. W. Swan, Corbin	0:57⅕	62.4
Philip Hines, Pope-Hartford	1:02⅖	57.7
I. A. Kline, Pullman	1:03⅗	56.6
Joseph Kenny, Ford	1:05	55.4
D. D. Holmes, Midland	1:12	50.0
J. B. Owen, Imperial	1:08⅕	52.8

Gasolene Cars $3,001 to $4,000.

T. F. Cheesborough, Thomas	0:57⅕	62.4
P. J. McDermott, Stevens-Duryea	1:08	52.9
W. A. Woods, Cleveland	1:28⅗	40.6

Four Cylinder Cars Over $4,000.

Caleb Bragg, De Dietrich	0:51⅖	70.0
D. E. Farrel, Stearns	0:52⅘	68.2
N. Swan, Stearns	0:52⅘	68.2
Arthur Warren, Stearns	0:54	66.5
John Lang, Isotta	0:54	66.5
James Doig, Stearns	0:54⅖	66.2

Special Mile—Thompson Trophy.

John Lang, Isotta	0:42⅘	84.1
J. H. Parker, Fiat	0:46	77.3
Wally Owen, American	0:52	69.2
R. De Palma, Allen-Kingston	0:52⅕	69.0
H. E. Trevor, Mercedes	1:04⅕	56.1

Six Cylinder Cars Over $2,500.

C. F. Alcott, Stearns	0:45	80.0
E. F. Buchanan, Thomas	0:52⅕	69.0
S. Carousso, Hotchkiss	0:58⅗	61.6
J. P. Disbrow, Ford	0:59	61.0
W. W. Burke, Mora	1:06⅕	54.4

Free-for-al, Any Type or Power

H. Kilpatrick, Hotchkiss	0:38⅗	93.3
Geo. Robertson, Fiat Cyclone	0:46⅗	77.0
A. P. Hedrick, Pope-Hartford	0:58⅗	61.2
E. F. Buchanan, Thomas	Disabled	

Stock Chassis, 301 to 550 Cubic Inches Displacement.

John Lang, Isotta	0:42⅕	87.3
J. H. Parker, Fiat	0:47⅗	75.6
J. M. Seymour, Simplex	0:51	70.6
L. Zengle, Pennsylvania	0:51⅕	70.3
A. Gentile, Pennsylvania	0:57⅗	62.5
A. P. Hedrick, Pope-Hartford	0:58	62.1

Lowell Race Plans Encounter Opposition.

It seems scarcely probable that the projected 250 miles road race in Lowell, Mass., will be run despite the fact that the common council had voted to grant the exclusive use of certain streets by the Lowell Automobile Club "for the purpose of speed tests on July 4th." The Lowell Automobile Club had laid out a 10 miles course through and around the city, and when the consent of the council had been obtained, not alone for the race, but for daily practice drives between the hours of 4 a. m. and 6 a. m., for the seven days previous to the 4th, they planned to have the biggest automobile race ever held in Massachusetts.

But their hopes have been dashed to earth. The city solicitor has rendered an opinion that the council has no authority to set aside streets for such a purpose. As a result of this opinion, the mayor has refused to sign the order, and the acting governor of the State has notified the automobile club that the law will not permit him to grant the club's request for the use of the State militia to patrol the course of the proposed race.

And if these set-backs are not sufficient to discourage the promoters of the contest, there is another in the shape of court proceedings which are threatened by a committee of tax payers who will apply for an injunction restraining the contestants from using the course, on the ground that public safety would be endangered by the running of such a contest.

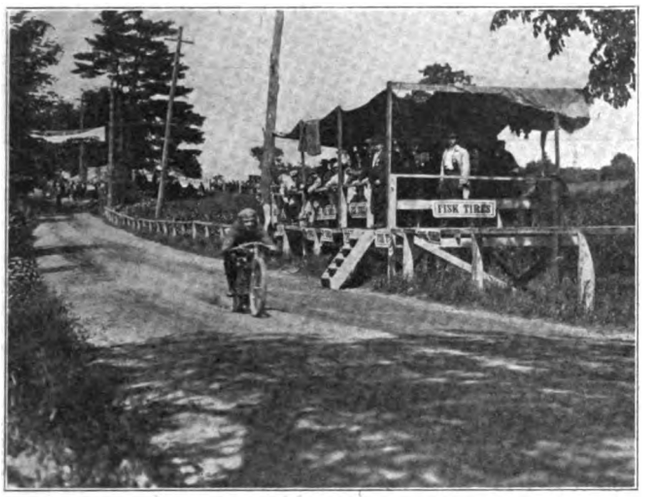
Strange to say, however, the Waltham authorities have granted permission for a repetition of the motorcycle road race which was held July 4th last year. At that time, when the legality of the procedure was in question, Secretary Fletcher, of the State Highway Commission, called the Mayor of Waltham to task, but later "drew in his horns" and pleaded that the commission had no right to interfere.

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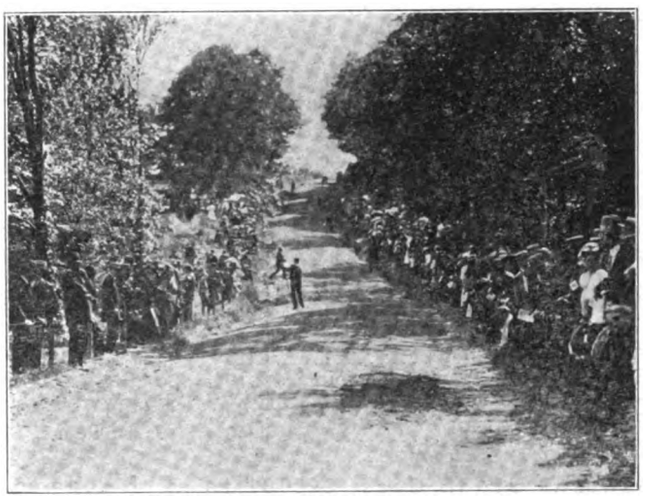
GREAT SPORT ON DEAD HORSE HILL

All Local Records Shattered at Worcester's Annual Climb—20,000 Spectators Present—Only One Near-Accident.

From every standpoint—numerical, sporting, social and record-breaking—the third annual hill climbing contest of the Worcester Automobile Club held on Dead Horse hill near that city on Saturday afternoon last, 6th inst., was a pronounced success, results being better than even the sanguine expectations of the promoter had hoped for. The weather was ideal and a crowd estimated at 20,000 enthused over the events.



STARTING POINT ON DEAD HORSE HILL.



VIEW LOOKING UP THE HILL.

When the gasolene laden atmosphere had cleared it was found that L. F. Baldwin, of Providence, had shattered all records for the club, doing the one mile grade in 55⅗ seconds. The old record was 1:01⅗. William Haupt, who carried off the honors at the Wilkes-Barre climb, made the best time for gasolene cars, doing it in 59 seconds.

For general all round honors the Thomas-Detroit cars made a great sweep, cleaning up four first prizes, three seconds and two thirds. Stevens-Duryea cars ran away with two of the events in which they were entered. These were captured by the "Little six", as the "big six" was protested on account of the shape of its body. The Peerless car got two firsts and two seconds. The Maxwell scored a first and a second.

The events were handled admirably and there were no delays and not an accident was reported during the afternoon. Everything went along like clockwork, and the first cars started nearly on time at 1.30 p. m., and the last car had climbed the hill at 5 o'clock. The hill was in better shape for racing than it was last year, as it had been treated with a preparation of calcide that kept down the dust.

The first event started was for high-powered gasolene cars and only two made the run. The first away was J. B. McKinney's Peerless, and it reached the summit in 1:15⅗. Then came L. Lorimer, Thomas Detroit, and he finished in three-fifths of a second faster. These two drivers, with the addition of Morgan Kent, Stearns, made up the event for gasolene cars from 40 to 60 horsepower, and McKinney won in 1:16. The event was remarkably contested as Kent's time was 1:16⅖ and Lorimer's 1:16⅗.

It was in the free-for-all that the crowd began to get excited and in this event were scored one of the two fastest times of the climb. L. F. Baldwin, driving a Stanley steam car, won the event in 57⅖. with Haupt, Chadwick Great Six, a close second in 59 seconds. This was the fastest time made by any gasolene car during the day. It was in the exhibition trials that Baldwin broke the record for the hill when he steamed up in 55⅗ seconds, a remarkable flight. Haupt also essayed the trials and his time was four-fifths of a second slower than in the free-for-all. The nearest approach to an acident was when Haupt made his first trial. He was steering with one hand when he ran over a stone in the roadway near the finish. The big car swerved and for an instant it looked as though the judges' stand would be swept out of the way. Haupt recovered control in a second and guided the car back on the course and across the finish line.

F. D. Everett, driving a steam car, won the Worcester county amateur championship in 1:16. J. S. Harrington, Thomas-Detroit, was the only other contender, but he made a close race of it by reaching the summit within four-fifths of a second of Everett's time.

It takes many little things to make up the interest in a hill climb and one person that contributed a great deal to the success of the Worcester event, not discounting the excellent work done by the officials in running the events off in record-breaking time, was "Jim" Murphy, the man with the megaphone. Murphy let loose a lot of Irish wit.

The crowd held its breath once when the limb of a tree broke and a venturesome young fellow started to parachute toward the earth, clutching the broken branch in one hand. However, as he passed another limb, he reached out and clung to it safely.

"Send the ambulance quick," megaphoned Murphy to the official stand. "There's a broken limb to be set."

Of course the crowd laughed as it did later when one facetious local wag named Batter came up and asked Murphy the score. "Batter out," said Murphy, giving the man a push back into the line, and then he lighted a cigar. This last pun rather frazzled his nerves. Taken all in all the hill climb was a success with a big "S," and the crowd seemed sorry when Announcer Murphy told the crowd to get ready for the great "Supper Handicap Retroclimb," which he explained would run downhill, the destination being wherever their supper "steaks" happened to be broiling. The summary:

Gasolene Cars, 60 to 75 H. P.

Driver and Car.	Time.
L. Lorimer, Thomas-Detroit	1:15
J. B. McKinney, Peerless	1:15⅗

Gasolene Cars, 40 to 60 H. P.

J. B. McKinney, Peerless	1:16
Morgan Kent, Stearns	1:16⅖
L. Lorimer, Thomas-Detroit	1:16⅗

Gasolene Cars, 24 to 40 H. P.

S. H. Hancock, Stevens-Duryea	1:15
L. Lorimer, Thomas-Detroit	1:17
O. Light, Thomas-Detroit	1:20⅖
J. Dower, Corbin	1:20⅗

Gasolene Cars, 15 to 24 H. P.

C. M. Stanley, Buick	1:49
J. E. Pugh, Overland	2:42⅘

Free-for-all Amateur; Gasolene Stock Cars.

J. S. Harrington, Thomas-Detroit	1:18⅖
J. L. Snow, Peerless	1:18⅘
F. E. Wing, Marmon	1:53

Free-for-all.

L. F. Baldwin, Stanley	0:57⅖
W. Haupt, Chadwick	0:59
H. T. Grout, Berliet	1:03⅕

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GENERAL VIEW LOOKING DOWN DEAD HORSE HILL

Gasolene Cars, $850 and Less.

W. Pollard, Maxwell 2:13
H. E. Rogers, Ford 2:15

Worcester County Amateur Championship.

F. D. Everett, Stanley 1:16
J. S. Harrington, Thomas-Detroit ... 1:16⅘

Gasolene Cars, $851 to $1,250.

C. M. Stanley, Buick 1:40⅖
F. F. Cameron, Cameron 1:45⅖

Gasolene Stock Cars, $2,001 to $3,000.

L. Lorimer, Thomas-Detroit 1:15
O. Light, Thomas-Detroit 1:16⅕
W. Bourque, Knox 1:20⅕

Gasolene Cars, $1,251 to $2,000.

E. P. Blake, Jackson 1:53
L. Tyler, Maxwell 2:06
A. R. Miles, Selden 2:32

Free-for-all, Gasolene Stock Cars.

O. Light, Thomas-Detroit 1:17⅕
J. Dower, Corbin 1:19⅕

Gasolene Stock Cars, $3,001 to $4,000.

P. J. Robinson, Stevens-Duryea 1:15
A. J. Andrews, American 1:19⅗
F. E. Wing, Marmon 1:41⅕

Gasolene Cars, $4,001 and Over.

J. B. McKinney, Peerless 1:16⅕

Record Trials.

W. Haupt, Chadwick 1:00
H. F. Grout, Berliet 1:03⅗
J. Dower, Corbin 1:10⅘
P. J. Robinson, Stevens-Duryea 1:05⅘
C. Basle, Mercedes 1:04⅕

Exhibition Trials.

L. F. Baldwin, Stanley 0:55⅗
W. Haupt, Chadwick 0:59⅘
H. F. Grout, Berliet 1:02⅖

Motorcycles.

F. C. Hoyt, Indian 1:04⅖
H. F. Clark, Indian 1:29
H. Clark, Indian 1:31



F. L. BALDWIN, STANLEY, BREAKING DEAD HORSE HILL RECORD

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WORK BEGINS ON MOTOR PARKWAY

Pardington Turns First Sod and Blows up Thirty Trees—Addresses by Vanderbilt, Hotchkiss and Others.

After 18 months of promise, the Long Island Motor Parkway assumed tangible proportions last Saturday afternoon, 6th inst. when the work of constructing the first section was inaugurated with befitting ceremonies on what is known as the "Barnes Tract," on the Jerusalem road, near Central Park, L. I. In the absence of W. K. Vanderbilt, Jr., president of the company, who, because of the critical illness of a relative was unable to be present, A. R. Pardington, the general manager of the Parkway company, assumed the initiative in turning the first spadeful of earth and pressing a button which set off thirty charges of giant powder, ripping up as many trees which encumbered the right of way, and thus signaling to the hundred laborers who were at hand, to commence operations.

Previous to this spectacular demonstration, a number of addresses were read, including one which had been prepared by Mr. Vanderbilt, but which in his absence was presented by Mr. Pardington. After paying tribute to the revolutionizing tendencies of the automobile, some of the trials attendant upon the inception of the immediate project were recounted.

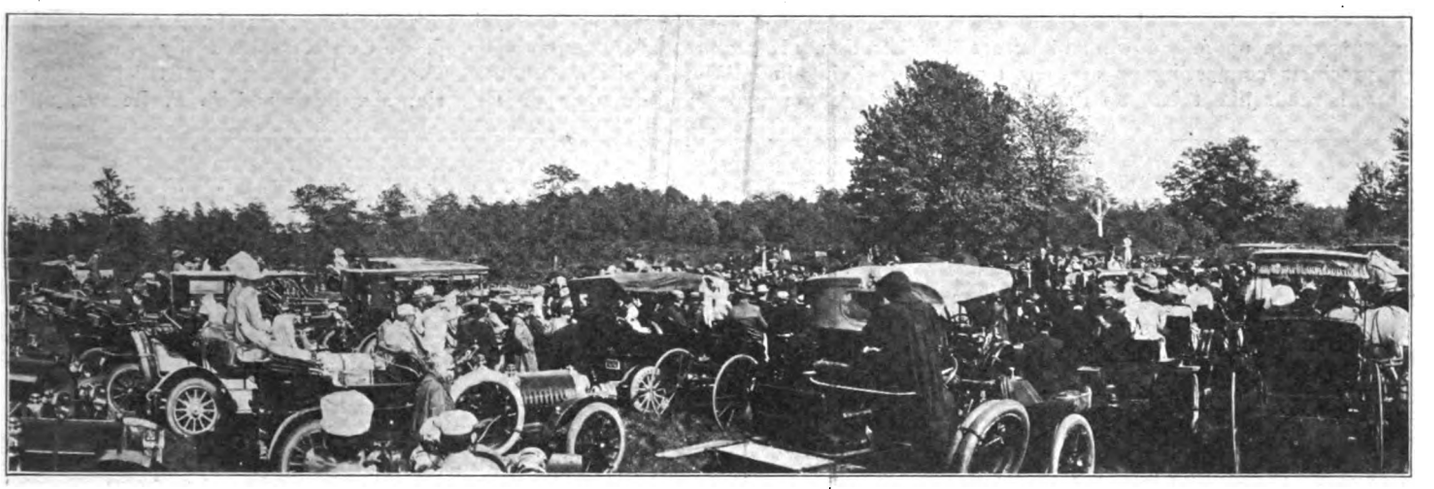
'We are here to-day to celebrate the commencement of work on a road, which when completed, will give the world one more mode of transportation," Mr. Pardington read. "There have been in the past highways for all kinds of vehicular traffic, canals for the movement of freight, railroads for the transportation of passengers, and trolleys for the convenience of those living in the suburbs of our large cities, but in no case has the motorist been considered.

"Although but a few years in existence, the automobile has come into such prominence that it has revolutionized all modes of travel. Distance has been eliminated, highways improved, unknown districts opened up, and pleasure given to thousands. And now the day of the automobile has come. A highway is about to be constructed for its use, free from all grade crossings, dust and police surveillance and a country opened up whose variegated charms are hard to equal in any part of the world.

"We have encountered in our preliminary work of raising funds and procuring right of way many unforeseen obstacles. But land owners in almost every case, seeing what a benefit a road of this character would be to their property, gladly came forward with help, enabling us to complete a 45-mile right of way. Now came the panic. Hard times were ahead, and it looked serious for the undertaking. Discouraging reports were circulated and other difficulties appeared. Nevertheless, with all these trials and tribulations, money slowly came into the treasury, and one obstacle after another was set aside. So that here we are, 18 months from the time the company was incorporated, ready to turn over the first spadeful of dirt, and this fall will see ready for use ten miles of Motor Parkway."

Speaking of "The Occasion and Its Meaning," Judge William H. Hotchkiss, president of the American Automobile Association reverted to the tendencies of motor traffic to turn the current of population away from the cities, and building on the idea of the Motor Parkway, forecasted the probable extension of such schemes, and even suggested the possibility of elevated motor roadways connecting the great cities with such trunk lines of automobile traffic.

"To-day at this place, the motor vehicle, as it were, takes to the rails," he said.



ASSEMBLAGE GATHERED TO WITNESS BEGINNING OF WORK ON MOTOR PARKWAY



MUSIC AND ORATORY PRECEDE GROUND BREAKING



A. R. PARDINGTON TURNING THE FIRST SOD

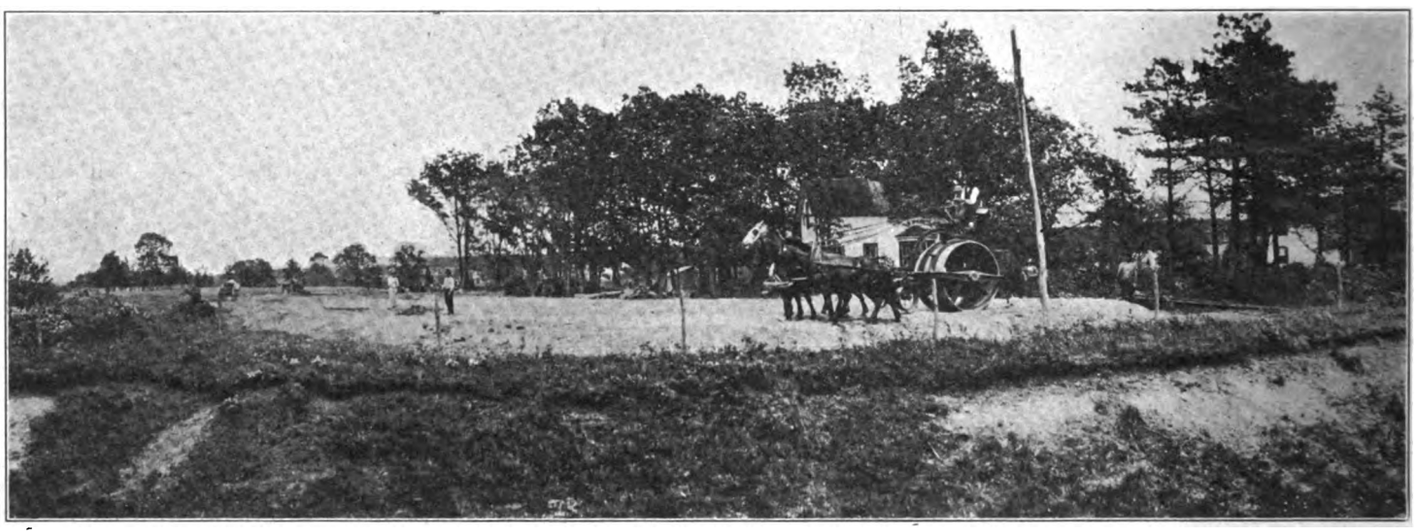
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"Like its predecessor, the steam car, it too has found the public roads at times uncomfortable. . . . . If there was need for such a road as this—and no one here will gainsay such need—is there not need for similar roads near other great centers of population, and will they not certainly be built?

"Carry the thought further. If such needs exist, how long will it be before the cities, particularly our great metropolis, yielding to the demands of a majority of the people—for sooner or later a majority will drive motor cars—will build elevated steel pavements up and down and across their precincts connecting up at their termini with roads like this? So that in the end we shall have pavements and roads built for the motor vehicle and to be used only by it."

August Heckscher, a director of the Parkway corporation, who has long been identified with the good roads movement on Long Island, spoke of the importance of the Parkway as an accession to the rapid transit of the local resident. A no less significant phase of the benefit to be derived from the realization of the plans under way, namely their effect on the realty values of adjoining territories, was discussed by Milton l'Ecluse, representing the Long Island Real Estate Exchange. The appreciation of the affiliated motorists was voiced by Russel A. Field, secretary of the Long Island Automobile Club, while John C. Wetmore, the orator of the New York automobile press, also delivered a few earnest words.

The present plan is to complete 10 or 12 miles of the Parkway this summer. A section, 22 feet in width and running from Central Park, L. I., to Lake Ronkonkoma, will be ready by the 1st of October, it is promised, and will be used as a porton of the course for the forthcoming Vanderbilt cup race. Ultimately the parkway will stretch from the Brooklyn city limits to Riverhead near the shore of Peconic Bay, Suffolk county. There will be no grade crossings, either with highways or railroads, and the entire course will be over a private right of way, properly fenced and safeguarded, and will be 100 feet in width and about 50 miles long. The estimated total cost of the enterprise is set down at $2,000,000 or thereabouts.



ROAD MAKING ON THE LONG ISLAND MOTOR PARKWAY

Utica Requires Local Registration.

Although the State law requires the registration of automobiles, the common council of Utica, N. Y., has made a radical move by enacting an ordinance calling for local registration. It requires every automobile owner living in Utica to register with the city clerk the make and number of his machine. No registration fee is required; the object of the registration being "to identify those who violate the speed ordinance.' It is not easy to determine the necessity for this local ordinance as the provisions of the State law cover the same object. However, 88 cars have been registered, and other owners may or may not follow suit as they see fit, no penalty having been provided for failure to obey the law.

New York Orphans on Their Outing.

Minus some of the circus characteristics which have been much in evidence on similar occasions in the past, the fourth annual automobile outing of New York orphans occurred on Tuesday, 9th inst. While there was lots of enthusiasm amongst the youngsters as they prepared for their trip to Luna Park, which had been donated for the day by its proprietor, there was a moderation on the part of the givers which made the affair more like an act of benevolence than a press-agented display of unfortunate little ones.

Fifteen hundred children shared in the good time. The automobile dealers contributed 140 cars and R. M. Owen, the New York agent for the Reo and Premier cars, furnished the lunches free for everyone.

The parade was divided into ten divisions, and was made up of children from the Hebrew Sheltering Guardian Society, New York Home for Destitute Crippled Children, Phelps School and Home for the Children's Aid Society, Industrial School of the Children's Aid Society, Leake and Watts Orphan House, Protestant Half Orphan Asylum, Howard Mission and Home for Little Wanderers, and the Mott Street Industrial School. Those in charge of the divisions were: Col. G. C. Pardee, assisted by J. F. Plummer; Mr. Broadhead and Mrs. J. N. Cuneo, assisted by Mr. Disbrow; George W. Bennett, assisted by F. C. Carrie; Mr. Pugh and A. P. Reeves, assisted by F. Cimiotti, Andrew J. Cone and I. H. Manning.

Gliddens Rest from Globe Girdling.

Having travelled 46,528 miles of the 50,000 which they purpose travelling, Mr. and Mrs. Charles J. Glidden returned to New York on the Campania last Saturday. On their last trip these installment globe girdlers drove through Syria, being the first American automobilists to take a car into that country. They also visited Italy, France, Monaco and Egypt. In many parts of the old world the governors of the various provinces provided armed guards as an escort. Mr. Glidden said the armed guards were necessary in Egypt to protect travellers from bands of Bedouin brigands. The Gliddens visited the Holy Land, and when they arrived at Jerusalem about 10,000 natives inspected the machine. He said the roads in Syria were fearful and it was often necessary to have the car pulled along over bad stretches.

Eight events have been scheduled for the meet to be held at Wildwood-by-the-Sea, N. J., on July 4th. It will be preceeded on July 3d by a regularity run from Philadelphia.

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OMAHA SEES FIRST HILL CLIMB

Nine Events Well Contested on West Dodge Road—Nestman Makes Best Time up One-Mile Slope.

Omaha's first hill climb held on Decoration Day on the mile incline on the West Dodge road, attracted about 2,000 people and was pronounced a success, although the officials had the time of their lives in keeping the course sufficiently clear for the contestants to start. After the first three events the crowd seemed to realize the danger of standing in the way of the oncoming machines and then the meet ran smoothly.

The nine events were well contested, the chief prize in each being a silver cup, donated by the promoter, the Omaha Automobile Club. A variety of merchandise, donated by the merchants of the city, made up the subsidiary prizes, revolvers, a dozen live squabs, a briar pipe, brass humidor, and a box of cigars being among the list.

O. P. Nestman, driving a Stevens-Duryea, made the fastest time of the day when he climbed the mile slope in 1:16 in the free-for-all event. G. B. Craven, Buick; Charles Smith, Stoddard-Dayton, and Brick Kuhn, Holsman, were among the other prize winners. The summary:

Gasolene cars listed at $1,000 and under—Won by G. B. Craven, Buick, 1:47⅘; second, A. C. Hartman, Buick, 1:49.

Gasolene touring cars listed between $2,250 and $3,000—Won by Charles Smith, Stoddard-Dayton, 1:22⅖; second, Carl Holt, Rambler, 1:51⅖.

Gasolene cars listed between $1,000 and $2,000—Won by A. C. Hartman, Buick, 1:44; second, Carl Holt, Mitchell, 1:45⅕; third, Berger, Buick, 1:49⅗.

High wheel motor buggies—Won by Brick Kuhn, Holsman, 2:53⅘.

Gasolene touring cars listed between $3,500 and $4,250—Won by Charles Smith, Stoddard-Dayton, 1:23⅘; second, O. P. Nestman, Stevens-Duryea, 1:25⅗; third, O. C. Shea, Packard, 1:27⅘.

Gasolene runabouts listed between $2,100 and $3,000—Won by Charles Smith, Stoddard-Dayton, 1:23; second, O. P. Nestman, Knox, 1:25; third, A. H. Fetters, Stoddard-Dayton, 1:28.

Exhibition against time—By R. R. Kimball, Stanley, 1:20.

Gasolene cars, free-for-all—Won by O. P. Nestman, Stevens-Duryea, 1:16; second, Charles Smith, Stoddard-Dayton, 1:25⅕; third, Rollo Smith, Thomas, 1:28⅖.

Gasolene cars costing $4,000 and over—Won by O. P. Nestman, Stevens-Duryea, 1:19⅘; second, H. C. Carr, Packard, 1:20⅘; third, Charles Smith, Stoddard-Dayton, 1:22.

Oregonians See Their First Road Races.

With characteristic western enthusiasm 10,000 people witnessed last Thursday, 4th inst., the first road race ever conducted in that part of the Pacific coast. The two events were conducted by the Portland (Ore.) Automobile Club. One was a race of 58.4 miles, the other of 102½ miles.

The course had been oiled and scraped and throughout its entire length of 14.4 miles was patrolled by the State militia. The cars, however, had hard luck; tire trouble played havoc with most of them, and of the seven starters in the shorter race only two finished.

The winner was H. M. Corey, of Portland, who drove a Cadillac over the 58.4 miles in 1:13:20. William Slimmons, of San Francisco, in a White, was second, in 1:20:44. The 102.4 miles race had 11 starters, but only three finished. H. Bell, Spokane (Studebaker), won in 2:04:08; second, N. R. Cooper, Seattle (Studebaker), 2:18:47; third, Fred Dundee, Rutland (White), 2:28:59.

Microscopic Measurements for Grand Prix.

"Splitting hairs" is not in it with the exactness with which the measurements are being made of the cars entered for the Grand Prix, as was made plain when Count de la Vallette, the measuring official of the sporting committee of the Automobile Club of France recently arrived in England for the purpose of measuring and stamping the cylinders of the English entrants for the race.

The Count was supplied with gauges which were passed and stamped by the French government. He made the statement that his gauges had been certified to be 155 mm. at 15° C, and were so sensitive that if warmed by the heat of his hands they would not enter any cylinders that would be accepted for the Grand Prix. The Count further declared that when he had warmed the gauges by holding them in his hands, he would not pass any cylinder that they would then enter.

It also was announced that the gauge for the overall outside width of a car consisted of two rigid gate posts set at the exact width, through which all entered cars would would be required to pass. All cars would have to be equipped with a crank case and a transmission case so arranged as to make it possible to look into them, so that there could be no doubt that the oil was entirely drained before weighing. If this arrangement could not be made the bottom of the cases would have to be removed.

The French official also was responsible for the statement that most of the French entrants were designed with all of the valves on one side, and that they were long stroke engines with small valves.

At the annual meeting of the Cedar Rapids (Iowa) Automobile Club the following officers were elected: President, E. C. Clark; vice-president, Dr. W. J. Morrison; secretary, A. E. Durin; treasurer, J. L. Bever, Jr.; club captain and steward, G. M. Averhill.

HAMLIN FIRST IN HALF CENTURY

Establishes a Pacific Coast Record at Los Angeles Meet—Kussman in Native Car Wins Two Events.

Before a crowd of 5,000 spectators at Agricultural Park track, Los Angeles, Saturday afternoon, 30th ult., Ralph Hamlin drove a Franklin "six" 50 miles in 57:43. His fast ride establishes a record for the Pacific coast for stock cars on a circular track. Three miles before the finish an official in the judges' stand signalled Hamlin to slow down, and if it had not been for this unaccountable interference Hamlin probably would have made even better time. probably would have made the distance in even better time.

starting in a two-bunch lineup in this order: Ralph C. Hamlin, Franklin; George Kussman, Tourist; Seifert, Stoddard-Dayton; Hal Stone, Pullman; Lester Pattee, Cadillac; McGeehee, Cartercar; Dan Kuhl, Stearns; Gregory, Moline Limited, and George Barnes, Haynes.

Hamlin took the lead at the start and for 23 miles did not have to take the dust for any of them. In the 21st mile Seifert began to crawl up and after a neck and neck spurt lasting several laps he passed Hamlin. The excessive speed proved disastrous to Seifert, however, and at the 35th mile Hamlin had regained the lead. From then to the finish it was nothing but Hamlin, and he lapped Kuhl and Pattee coming into the stretch of the 37th mile. In the next mile Seifert withdrew. The remaining 12 miles were covered with the first three cars in the same relative positions, Kuhl getting second, and Pattee third. Barnes had been compelled to quit after running 16 miles in fast time and the other drivers had gone these distances when the race was finished. Stone, 36 miles; McGeehee, 34; Kussman, 35, and Gregory, 30 miles.

Only two drivers lined up for the five miles for small runabouts, and Gump, Jackson, was unable to make any kind of a showing against Roe, Ford. The former quit after two miles and the latter enjoyed a walkover finish in 4:32⅗. The summaries:

Three miles for runabouts costing $900 and under—Won by A. E. Roe, Ford; S. N. Gump, Jackson, did not finish. Time, 4:32⅗.

Three miles for touring cars costing $1,600 and under—Won by George Kussman, Tourist; second, McGeehee, Cartercar. Time, 4:05⅕.

Five miles for cars costing $1,601 to $2,500—Won by George Kussman, Tourist; second, Seifert, Stoddard-Dayton; third, Copeland, Jackson. Time, 6:19.

Fifty miles free-for-all stock cars—Won by Ralph Hamlin, Franklin; second, Dan Kuhl, Stearns; third, Lester Pattee, Cadillac. Time, 57:43.

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"AROUND THE CLOCK" ENDURANCE

First Contest of the Sort on Pacific Coast—Nine of Eleven at Finish Have Perfect Scores.

Nine drivers were awarded perfect scores on the result of the 24 hours endurance contest which commenced Saturday, May 30th, and was held under the auspices of the Automobile Dealers' Association of California over what is known as the San Leandro course. It was the first 24 hours event of its kind to be held on the western coast, and so far as is known, the first "around the clock" ever undertaken on the public highway by drivers of touring cars. There were 15 starters, of whom 11 finished.

The course, which scaled about 27½ miles to the lap, followed the sides of a rough triangle, with San Leandro as the starting and finishing point. The 12 laps were scheduled to be run on a time allowance of 2 hours each, but no restrictions were placed on the drivers as to running time, except for the 6th and 12th laps, which had to be completed within 3 minutes of the 12th and 24th hours. The times were checked for each lap, however.

Of the two cars completing the 570 miles, but failing of perfect scores, the Franklin, driven by Peter Callender, and carrying four passengers and an observer, was disqualified because its gasolene supply failed between controls. Notwithstanding, it finished on schedule time. In the case of L. C. Miller's Cadillac, a penalization of 36 points resulted from a broken commutator wire. Gus Boquet's Tourist and D. E. Whitman's Rambler were withdrawn on the first lap, while F. J. Wiseman's Reo and F. O. Renstrom's Pullman stopped on the 6th and 10th, respectively.

Beginning at two o'clock Saturday afternoon, the cars were despatched on five minutes headway. The first lap was covered by most of the cars at pretty high speed, in a hysterical effort to establish plenty of lead over the clock in order to forstall any emergancies. None of these, arising, howerve, the succeeding laps were for the most part covered with a fair degeee of regularity and leisure. The Autocar driven by E. E. Bodge signalized itself by sticking closest to the 2 hour per lap schedule.

A most unusual circumstance in connection with an event of this general nature, was the fact that the officials were enabled to announce the final results on Sunday afternoon after only about a half hour's work. Those who finished with perfect scores, and the cars which they drove, were as follows: E. L. Peacock, Mitchell touring car; Frank Murray, Buick runabout; Max Rosenfeld, Peerless touring car; H. E. Anthony, Stoddard-Dayton roadster; R. G. Fowler, Pope-Hartford touring car; J. H. Eagal, Studebaker touring car; E. S. Martin, Mitchell runabout; Ray McDonald, Tourist touring car; and E. E. Bodge, Autocar runabout.

Indecisive Run-off at Kansas City.

Although 17 cars were tied in the 145 miles endurance run which the Automobile Club of Kansas City held on May 16th, there were only nine starters in the run-off which occurred on Saturday, 9th inst., for the purpose of breaking the tie. Of the nine starters, seven finished, but who won is a question which has not been decided. The day after the second run, the judges announced that it would be several days before a decision could be reached. While J. F. Moriarty, Stevens-Duryea, was the first to arrive back in Kansas City, H. Holtzhaurer, Pope-Hartford, made better time and claims the prize. The others who finished, and whose scores have not been announced, are H. E. Rooklidge, White; W. S. Hathaway, Maxwell; M. C. Nolan, Stevens-Duryea; C. J. Simons, Oldsmobile; W. M. Goodrich, Studebaker; Roy Sanborn, Stanley. Fletcher Cowherd, Corbin, did not finish.

Nazzaro Claims New World's Record.

In England, where they do not appear to know as much about American records as they ought to know, Felice Nazzaro, the Italian driver, is credited with having on June 8th, made a world's record by covering a lap on the Brooklands track, near London, at the rate of 120 miles per hour. But in 1906, Demogeot, on the Ormond (Fla.) beach, covered two miles straightaway in 58⅘ seconds, or at the rate of 122.4 miles per hour, and as Marriott flashed the mile in 28⅕ seconds or 124 miles per hour, Nazzaro's performance is not so wonderful as may appear, although it was, of course, made on a concrete track requiring a circuit. The Brooklands track, 2 11-16 miles per lap, is in many respects practically two parallel straightaway courses, connected by scientific curves.

Status of New Jersey Licenses.

To settle a moot question, New Jersey's Attorney General has rendered an opinion on the validity of automobile licenses issued prior to April 16, 1908, the date the amended Frelinghuysen law went into effect. The Attorney General holds that licenses issued in the period from January 1, 1908, to April 16, 1908, are good for a full year, but is of the opinion that there shall be no pro rata license fees for the fraction of a year remaining between the expiration of a license taken out in 1907 and December 31 of this year.

New England Tour for A. C. A. Members.

The Automobile Club of America will conduct a members' tour, June 18-28, from New York through the Naugatuck Valley, Berkshire Hills, and the White Mountains to Poland Springs, Maine, and return. It will be in charge of Waldron Williams.

MANY VICTORS ON VALLAMONT

Ward, Matheson, Makes Best Time at Williamsport Hill Climb—Accidents at the "Hairpin" Curve.

Vallamont Hill, a terrestrial protuberance near Williamsport, Pa., was peopled by a crowd estimated at 10,000 on Saturday afternoon, 6th inst., when the second annual hill climb of the Williamsport Automobile Club was held. The crowd was rewarded by seeing Charles W. Ward in the Big Six Matheson better his record of last year by going up the mile incline in 1:40⅗. His time last year was 1:59. They had also the sensation of seeing the same driver go over a steep embankment through the loss of a tire at a sharp curve known as the "Hairpin." This was in the 13th event on the program. Ward fortunately escaped injury.

In the free-for-all for stripped and racing cars, Ward won the club cup by making the hill in 1:51⅗. In this race A. A. Jones, of Philadelphia, driving a Ford car, lost control after taking the "Hairpin" curve successfully and his car skidded from one side of the narrow roadway to the other, finally throwing the driver out, running over him and then plunging down the bank into the woods. Jones, when picked up, was found to have several ribs broken, an elbow badly injured, while he was cut and bruised all over. The summary:

Event No. 1, for Ford cars exclusively—Won by Claude Kaufman; A. A. Jones, second. Time, 2:13⅗.

Event No. 2, for electric cars—Won by F. G. Pecks, Babcock; Henry Noll, Pope-Waverly, second. Time, 3:12.

Event No. 3—Won by E. H. Zimmerman, Jackson; Longstreth, Maxwell, second. Time, 1:55.

Event No. 4—Won by A. A. Maitland, Buick; J. A. Gable, Buick, second. Time, 2:36⅘.

Event No. 5—Won by C. W. Ward, Matheson. Time, 1:40⅗.

Event No. 6, for Franklin owners exclusively—Time, 2:14⅗.

Event No. 7—Won by C. P. Brockway, Overland; C. B. Kaufman, Ford, second; E. H. Zimmerman, third. Time, 1:57.

Event No. 8—Won by C. P. Brockway, Overland; F. P. Brand, Imperial, second; J. H. Link, Maxwell, third. Time, 1:55⅖.

Event No. 9—Won by John A. Gable, Rambler. Time, 2:17⅕.

Event No. 10, for motorcycles—Won by Gable, Indian; Archie Wemple, Reliance, second. Time, 2:13⅗.

Event No. 11, for Maxwell cars exclusively—Time, 2:00.

Event No. 12—Won by Stevens-Duryea. Time, 2:02⅘.

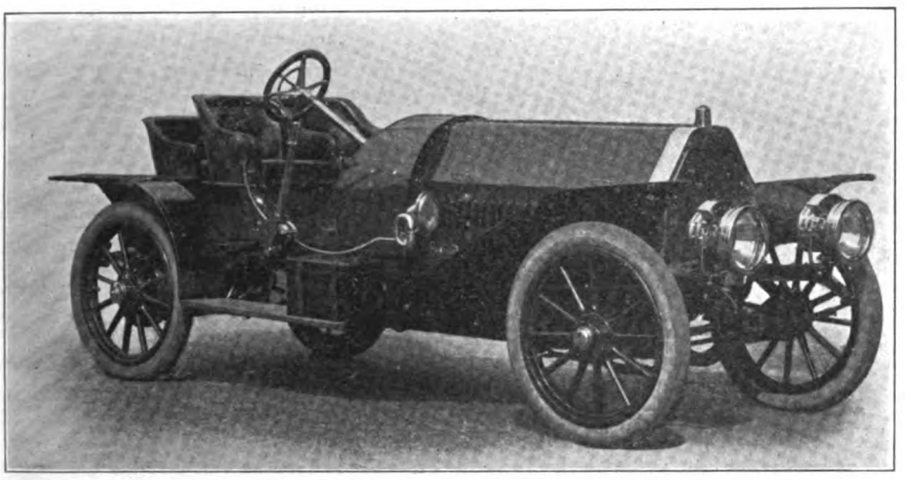
Event No. 13—Won by Imperial. Time, 1:58⅗.

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ANOTHER NEW ROADSTER MODEL

Flexibility of Purpose Shown in Body Design of Jewel 40—Mechanical Specifications of the Car.

Roadster models continue to multiply on the market with a rapidity and constancy which speaks volumes for the faith of the makers in the permanency of the demand for these handy and serviceable vehicles. The most recent development of that sort is the "Jewel 40," which the Forest City Motor Car Co., Massillon, O., has produced by way of rounding out its line. As the accompanying picture shows, it possesses the usual roadster runabout characteristics as far as the placing of the motor, the two principal seats and the mechanism of control are concerned. The rear seat, which accommodates one passenger, is removable, as a matter of course, so that the vehicle may be used without it, or with a double-passenger seat replacing it, thus establishing that flexibility of purpose for which the runabout type of body is most admired.



JEWEL 40 ROADSTER

The mechanical specifications of the car are closely allied to those of "Model G," the touring car made by the same concern. The motor is the four-cylinder Rutenber type, with cylinders of 4¼ by 5 inches bore and stroke, self-contained lubricating system in the crank case, and a six-feed mechanical oiler in addition. Ignition is of the duplicate pattern, with Bosch high-tension magneto and alternative of accumulator cells and coil. The transmission group is composed of a three-speed sliding gearset actuated through a cone clutch fitted with cork inserts, propeller shaft and full floating rear axle. The minimum gear reduction is 2½ to 1, and the change gear affords three variations of forward drive. The bearings of the transmission, as well as those of the front and rear wheels are of the Timken roller design—a method of shaft mounting which also is applied to the steering gear.

The frame is of pressed steel; the spring suspension is semi-elliptic in front and platform in the rear double, internal-external brakes are applied to the rear wheels; and the wheel and tire sizes are 36 by 4 inches. The wheel base is 120 inches, and the total weight is listed at 2,400 pounds. The equipment included is complete down to a full set of lamps, including the headlight and generator installation.

Method to Lessen Headlight Glare.

Among the possibilities in connection with the very desirable dimming of searchlights when running through traffic, one which has not been exploited, so far as is known, is that of shifting the flame out of focus for the time being, or, what amounts to the same thing, shifting the lense or reflector. In lamps which are provided with lenses in front of the flame, the tilting of the lense through a small angle would distort the rays sufficiently to check the projection of the long distance beam, while in lamps not embodying a lense in front, a tilting of the central portion of the reflector might be made to accomplish the same thing. Such an arrangement would entail an alteration in the structure of the lamp.

World's Production of Copper Declines.

Last year for the first time in 15 years the world's production of copper showed a decline, according to statistics issued by a German metal company. The 1907 output, states this authority, was 713,000 tons. Of this amount, the United States contributed no less than 421,400 tons, England following with 72,400 tons, Central and South America with 57,000, and Germany with 31,900 tons. As in the matter of production, the United States led in the estimated consumption with a total of 232,600 tons, Germany, England and France, followed with 149,800, 108,200 and 65,000 tons, respectively.

EXPENSES SWAMP HUGE INCOME

Despite 5,000,000 More Passengers Berlin Omnibus Company Loses Money—Upkeep Half Original Cost.

During the year 1907, the General Omnibus Co., of Berlin, the largest undertaking of its kind in Germany, carried no less than 133,800,000 passengers. This represents an an increase of 5,000,000 passengers over the number carried in 1906, or a growth in paying business of 4½ per cent. To add further to the apparent prosperity of the enterprise, an advance in the total traffic receipts of 10 per cent. was experienced. Notwithstanding this grand showing, however, the year's balance reveals a loss of about $130,000, after allowing for depreciation. In the director's report this fact is attributed to a growth in general expenses, to which is added a deplorable item for maintenance and improvement of the rolling stock, which, it is said, amounted to nearly 50 per cent. of the original purchase price of the machines. The fact that the company is restricted in the matter of its takings since the rates of fare are subject to the sanction of the police authorities, probably has a good deal to do with the unfortunate trend of the returns.

Little Things with a Reason.

In overhauling a machine, it is extremely difficult not infrequently to "see the reason" for a number of little arrangements of the parts—devices which probably have cost the designer much thought, have been suggested by previous unpleasant experiences, and have been installed by the maker at some slight expense, as preventive and therefore necessary measures. On this account, the owner would do well to beware of stray bits of metal left over after a general clean-up of the power plant.

A case in point is the use of screens and wicking over the bearings in the gear case. Apparently there is no need for them; they tend to impede the flow of oil; they might at some time get adrift in the case and grind up between the gears; they are generally useless, says the amateur mechanic. As a matter of fact, however, they are placed there to strain from the oil as it is thrown over, any stray particles of metal, chipped from the gears, which might score the bearings. A similarly important purpose is served by the check valves which are sometimes placed at the delivery points of the oil feeds to the motor, by the grease cups which are stuck on in places where there is apparently no motion to require the alleviating influence of the lubricant, and by any one of a dozen other little details.

"The A B C of Electricity." Price 50c. The Motor World Co., 154 Nassau Street, New York City.

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ECONOMY IN CITY REPAIR WORK

Saving Effected by Operating Municipal Plants—What the Street Cleaning Department Has Accomplished.

With the number of automobiles used by the various departments of the municipal government constantly increasing, the city of New York has given considerable thought to the erection of a municipal garage. Though nothing decisive in this matter has been determined, some of the individual departments have taken up the subject of automobile repairing with the idea of cutting down the maintenance cost, a large part of which expense is incurred by having repairs done in regular garage and automobile repair shops.

While some of the city departments are not supplied with stables or buildings in which automobiles may be stored, others have not alone stables, but machine shops as well, and where plants of this kind are maintained in connection with the regular equipment of a department, the upkeep expense of that department's motor cars has very considerably decreased.

One of the departments which has seen the advantages of doing its own repair work is the department of street cleaning. While this branch of the city government long has maintained an elaborate shop equipment for use in repairing the large number of carts and other vehicles which the work requires, the development of an automobile repair shop has been of comparatively recent origin.

It was about three years ago that the use of automobiles in connection with city departments first began. Since that time the number of city owned motor cars greatly has increased until at this date there are about 100 belonging to the city, and of this number the street cleaners have ten. While the official garage of the department is located in an abandoned fire engine house in Mulberry street, the development of the repair shop has been in a building largely devoted to repair work of another nature, i. e., the up-keep of trucks, sprinkling carts and other similar vehicles. In this building, which is located on Seventeenth street and Avenue C, the equipment has been for blacksmiths, wood workers, harness makers and men whose work was in connection with the large fleet of scows and dumpers which the department maintained. As the building contained a power plant, it required but the installation of proper machinery, and the hiring of men to operate it, to establish an automobile repair department. About two years ago there was installed an engine lathe, milling machine, shaper, drill press, and emery wheel. A room of sufficient size to contain several cars was set apart on the mezzanine floor, and an elevator to carry the cars was put in. A division of this room was made and the machinery installed in the division, which is just large enough to contain the tools and the one car on which the men may be working.

As the civil service laws do not control the appointment of "automobile engineman,"—the official title of the city's chauffeurs—it was possible to appoint any men whom the head of the department wanted for this position; it therefore was comparatively easy for the commissioner to engage the machinist to look after the repairs. A man was appointed, without thought as to his ability as an automobile driver, and another man with the same title and pay—$1,200 per year—was appointed and directed to act as a helper. These two constituted the regular shop employes, and this force was agumented from time to time by the addition of the chauffeur whose car was undergoing repairs.

When it is considered that the work which is required of the department of street cleaning's motor cars it readily will be seen that the wear and tear on cars whose use is confined almost entirely to city streets, will be very severe. The very nature of the service requires that all kinds and conditions of pavements should be encountered, and as city chauffeurs take advantage of the fact of being municipal employes, the speed laws usually are ignored with the result that the cars are given severe treatment, if not actual abuse.

Because of the demands made on the cars the repair shop always is busy. At least one car is being worked on, and often another, or may be two more, are in the outer room waiting repairs. As soon as a car goes into the shop, whether the shop hands can start at it right away or whether it must wait its "turn," the driver of it at once does the preliminary work of dismantling and cleaning, so that no time will be lost when the actual repair work may be begun. If the repairs are of such a nature as not to require machine work, a broken spring, for instance, or a new spoke in a wheel, the work can be done by the department's regular mechanical branch, irrespective of the automobile repair shop, in which case the chauffeur shows what is needed, and when the new spring or repaired wheel is returned, he reassembles his car and goes out upon his round of duty.

Obviously, an important factor to be considered in the question of the economy of the work, is the efficiency of the repairman. In this respect the street cleaning department is fortunate in having as its master mechanic a man who is entirely competent. To him must a car be taken before the chauffeur can "lay it up." Usually the master mechanic takes an "inspection ride" in a car which is declared out of order, and as a result of the practical demonstration, the amount and nature of the repairs which are to be made is determined on. While some of the men who were employed as shop hands showed incompetency, they easily were gotten rid of, as, not being civil service appointes, they could not claim civil service protection. The department thus was able to appoint and dismiss its automobile men until finally it obtained those who were conscientious and capable, and because of the efficient force which now is employed the repair shop serves as a means of economy instead of a source of unwarranted expense.

The system as worked out in the street cleaning department has distinct advantages. It reduces the cost of repairs, and it is the means of saving much time. The department is sufficient unto itself, and through its regular mechanical force and automobile repair shop, it can, if necessary, build an entire car and all its parts and accessories, excepting the tires.

That the repair shop is economical is shown by figures recently obtained from the comptroller's books for the year 1907. During this year the street cleaners spent $2,739 for repairs, while the police department, with fewer cars, paid over $3,500 to outside shops. While it is not possible to know the mileage of the cars of either department, it is almost certain that the distance traveled by the street cleaning automobiles vastly exceeded that of the other department.

While the municipal automobile repair shop largely was in the nature of an experiment, its two years of existence has justified its continuance, and the results which have been obtained will undoubtedly hasten the ultimate decision of having all the city owned automobiles repaired in a shop or shops owned and paid for by the municipality.

"Long-Arm" Axles of New Type.

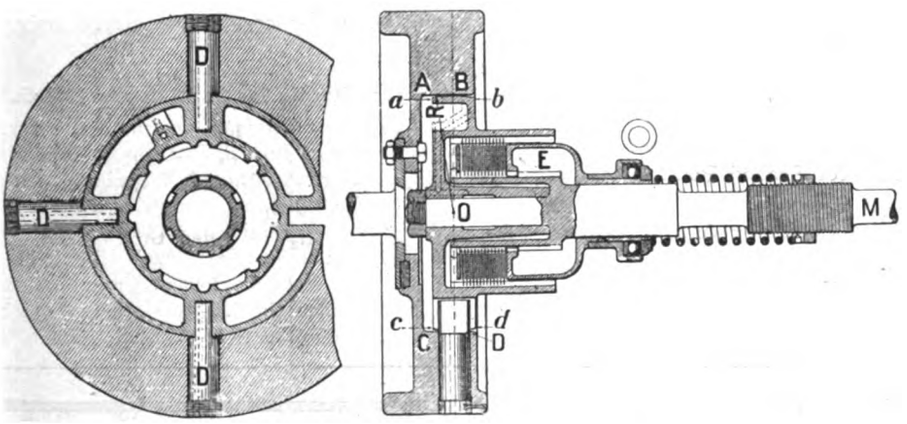
Among the useful products of the "Long-Arm" System Co., Cleveland, O., which are being prepared for the builders of 1909 cars, are the new type "B" axle sets, which are designed for cars of 30 to 45 horsepower with maximum loaded weights up to 4,000 pounds. These are in the main similar to the sets produced hitherto and used on several American cars of this year's production, but differ from them in point of minor detail. The front member of the set is of the popular I-beam pattern, equipped with inverted Elliott steering knuckles, and integrally forged spring pads. By the ingenious device of forging these pads of very large size, and subsequently milling them down to specification, it is possible to employ a wide range of spring width and center-to-center distance, and thereby increasing the utility of the model greatly. Two types of rear axle are built, one of the full floating type, with bevel differential gears and cast steel housings, and the other of the semi-floating type, with large Hyatt roller bearings for the outer support, but otherwise similar to the full-floating axle. The other bearings, like those of the standard set have either cone or annular races, fitted with special alloy balls.

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BRAND NEW IDEA IN A CLUTCH

Novel Combination of the Multiple Disc with a Cardan Mounting—The Advantages of Each Retained.

Absolute flexibility in the connections between the essential elements of the power plant requires the use of a considerable number of universal or cardan joints in the mechanism of the well-designed car. In the case of the connection between the master clutch and the gearset, or between the motor and the clutch, this requirement frequently involves some little mechanical complication which might be avoided profitably were it possible to dispense with the provision for universal movement or were it possible to condense the clutch and universal joint into a single organ. This latter improvement over the ordinary arrangement is embodied in at least one clutch of the plain cone type, and of American manufacture. An entirely novel application of the same principle is, however, found for the first time, so far as is known, in the Cottin & Desgouttes clutch, which has lately been introduced into the French chassis of that name.



It is, so to speak, a combination of the multiple disc clutch with a cardan mounting, the result being the retention of all the advantages of the former with the extreme flexibility and freedom from cramping tendencies of the latter. This provision is, of course, especially desirable in a clutch in which, with the small clearance of the type, the slightest tendency to disalignment may cause binding with consequent inability to disengage completely.

From the accompanying illustration the general arrangement of the device will be seen. Made solid with the fly wheel is a cylindrical recess concentric with the axis O-M of the clutch, and having the radius O-R. Within is mounted the spherical clutch body, a-b, of the same diameter as the cylinder and compelled to turn with it. Obviously, any alteration of the alignment between the two will be accommodated by the spherical exterior of the clutch body, while the driving relation will remain undisturbed.

In order to transmit the driving torque from one element of the clutch to the other, four driving pins or tenons are employed, as at D-D-D, which are seated in as many holes placed at right angles to one another in the body of the fly wheel, and are fitted in guide slots, c-d, in the exterior of the clutch body. A veritable universal joint is thus formed. Within the casing so mounted the usual floating and stationary discs of the clutch are placed.

The clutch shaft is connected to the driving shaft of the transmision by means of a threaded sleeve, which is retained in place by a spring locking pin. By backing this off a few turns and releasing the eight bolts which retain the flange coupling of the crank shaft on the face of the fly wheel the entire shaft and clutch may be withdrawn as a unit. The complete operation of dismounting the clutch and remove it from the chassis may be performed in less than two minutes, it is claimed.

To Prevent Trouble from Drippings.

There can be no question of the necessity of providing thorough and effective means of draining the under pans of all chassis in order to prevent the accumulation of inflammable vapors and their liquids. But in addition to this care should be taken to have the exhaust piping so arranged that in the event of a leaky gasket or a broken muffler casing there will be no danger of a discharge of sparks into the enclosure beneath the mechanism. In this connection care should be taken to see that the muffler cutout is not so placed as to permit any discharge under the car body. As for the carburetter, in order to prevent trouble from drippings of fuel, it is well to provide either for drainage entirely external to the pan, or else into a separate compartment independently drained. The old-fashioned canvas under-boot is never to be encouraged. It is but a make-shift at best, but when oil-soaked, it becomes a positive menace to safety.

MAY REVOLUTIONIZE INSULATING

German Substitute for Celluloid that Displays Remarkable Qualities and Appears of Far Reaching Promise.

Great commercial possibilities are thought to be held forth by a new substance, known as Cellit, which is announced as an incombustible material closely related in its properties to celluloid, but differing from it in that one material respect. It is a recent German invention, the origin of which is credited to a Dr. A. Eichengrun. If present hopes in it are realized, it may come to supplant the celluloid of commerce in nearly all of its practical applications, and also to have a much wider range of application, as in replacing rubber for the insulation of electric wires, as a transparent varnish for coating leather and woven fabrics, and in numerous other uses.

Although many attempts have been made to produce such a substance, none have been successful up to this time. A discovery of some ten years ago, for instance, acetyl-cellulose, as it was called, proved to be too soft to be useful. A later discovery, tri-acetyl-cellulose, which was made directly from cotton-wool, could not be employed, because it proved to be soluble only in chloroform, which is so injurious to the human system when handled extensively as to preclude the application of that particular compound in any practical way. The new acetyl-cellulose, however, differs from its predecessors in several respects, and among them in its property of solubility in camphor, acetic ether and other harmless solvents.

In a recent demonstration before the Dusseldorf Scientific Society, the inventor exhibited a wide variety of samples of cellit products. All such variations are perfectly transparent, unaffected by water, and not brittle. Some varieties cannot be ignited at all, while others burn but slowly. Some were hard, like celluloid, others soft like leather, and still others elastic like rubber. Samples were exhibited of papers and fabrics coated with the new substance employed as a sort of waterproof enamel, others of imitation "patent leather," and oil cloth in which the pattern was woven in the fabric, but transparent through the cellit coating. Most remarkable of all, however, was the successful use of cellit in insulating electric wires.

Speaking of the discovery, the Scientific American remarks: "In cellit, therefore, we have a new material which combines the good qualities of glass, gelatine, celluloid, leather and India rubber, and which may advantageously be substituted for these materials for many purposes. But cellit will also find entirely novel and peculiar fields of usefulness, as it at once is as transparent as glass and as flexible as cloth."

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None Perfect in Washington Run.

With excellent roads and perfect weather conditions, 13 of 16 starters finished the endurance contest promoted by a Washington (D. C.) newspaper on Tuesday, 9th inst. The distance was 164 miles, and the course took the contestants through the States of Maryland, Virginia and West Virginia. While no perfect scores were made, two drivers, Luttrell (Buick), and Miller (Ford), were tied with only 2 points penalization each, in the light roadster class; strangely enough each of the two drivers was penalized for the same cause—stalled motors. In the roadster class Shaab (Stearns), also lost but 2 points, but because of his muffler becoming loose, the car had no running troubles and the defect was found only when the examintion took place in the garage after the run had been completed. H. Gill (Thomas-Detroit), went through with what he thought was a perfect score, but lost 15 points when it was found that a front axle was bent.

With the exception of the cars mentioned all had to break seals and do little odd jobs or one sort or another. Thomas (Pullman), lost 42 points through the necessity of tampering with his ignition system, and Zell (Thomas), was bothered by his left chain slipping off. Bliven (Franklin), had hard luck in breaking a steering knuckle, but came in with a man on the running board guiding the car. Jose (Cadillac) had to break a seal because his gasolene pipe got stopped up; he was penalized, too, for taking on water and for a brake that worked loose. Shuler (Mitchell) was fined 80 points for being late at controls, 56 points for road repairs and 52 points for a bad brake. Lutz (Oldsmobile), suffered principally because of punctures—he had 9—his brake cost 35 points, and at inspection he lost 3 more. Jacobi (Columbia), ripped out all his lower gears, but arrived finally by driving on high. Padgett (Maxwell) lost points because of his brake, which became loose and did not work well. Lost time was responsible for most of Matson's (Corbin) penalization. The score:

Light roadsters—Luttrell, Buick, penalization, 2 points; Miller, Ford, 2; Padgett, Maxwell, 51.

Roadsters—Shaab, Stearns, 2; Matson, Corbin, 40; Thomas, Pullman, 42; Zell, Thomas, 117.

Touring cars—Gill, Thomas, 15; Jose, Cadillac, 141; Bliven, Franklin, 188; Shuler, Mitchell, 188; Lutz (pilot), Oldsmobile, 338; Jacobi, Columbia, 1,058.

Card for Second Point Breeze Meet.

Eight events constitute the program for the second annual race meet of the Quaker City Motor Club, to be held at Point Breeze track on Saturday, June 13. The distances range from one mile to 50 miles, the long distance race being a fre-for-all.

From Broncho Busting to Motor Racing.

From broncho busting to automobile racing will be the range of entertainment with which Douglas City, Arizona, will regale itself on the Fourth of July. The last named feature will be a novelty there, and it is planned to make it a successful one. It will consist of a 40 miles road race, and the course will include some of the streets in the city as well as roads in the immediate vicinity.

Elks to Hold Automobile Meet.

Automobile races will constitute one of the big features in a festival which the Washington Lodge of Elks, No. 15, of Washington, D. C., will hold at the Bennings race course, June 16, 17 and 18. The meet will be under the sanction of the A. A. A., and is scheduled for the afternoon of the 18th. There are five events on the card, one being for cars to be driven only by Elks.

Beach Racing for Cape May's "Fourth."

The motor car is to dominate the day in the Fourth of July celebration at Cape May, N. J., this year, although Wheelock's Indian band of 40 pieces, composed entirely of American Aborigines, will assist in the holiday making. Races will be held on the beach front boulevard, and on the strand, under the auspices of the Quaker City Automobile Club of Philadelphia.

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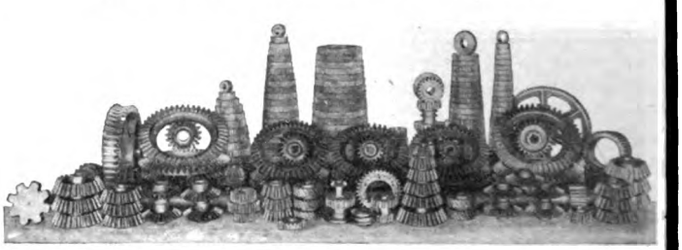


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HOW LUBRICANTS ARE TESTED

Simple Apparatus for Determining Their Quality—One Test the Owner can Make for Himself.

Probably the average motorist is more interested in knowing how well a certain brand of lubricating oil is likely to work in his motor than he is in learning its chemical composition or what steps are involved in its manufacture. Indeed, the chemistry of lubricants is commonly considered to be so extremely technical and involved in every respect that it is somewhat surprising to learn that the processes

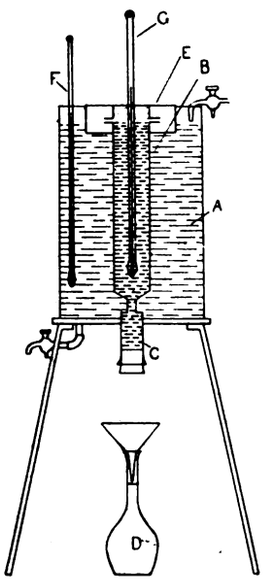


Fig. 1

applied in oil testing are, as a rule, comparatively simple and easy to understand. Furthermore, a casual summary of these methods of test reveals something of the amount of care which must be observed in the production of an oil possessing just those qualities which are required for it.

Without enumerating in detail the "specifications" which are required in a perfectly suitable gas engine oil, it is sufficient to indicate that four different properties must be taken into account, though these may be divided into a greater number when more intimately examined. For general purposes, however, those qualities which are of the greatest significance in an oil for use in the internal combustion motor are: the body, or practically speaking, the resistance which it offers to being squeezed out from between the bearing and its journal; its density or specific gravity; its resistance to the effect of heat in thinning, or changing its body, gumming, vaporizing and carbonizing, and the temperatures at which these effects may be supposed to take place; and its corrosive action on metal with which it may be in contact.

The technical equivalent for the quality noted as body, is viscosity. What is known as viscosity of an oil is merely an arbitrary statement of its degree of fluidity. Actually, it is the number of seconds required for a known quantity of the oil to flow through an orifice of a certain diameter, when the oil is maintained at a stated temperature. Because viscosity varies at different temperatures, and because some oils thin out more rapidly than others when subjected to heat, viscosity alone cannot be taken as the true measure of value in the lubricant. In conjunction with other tests, however, it is considered of great importance.

A standard type of viscosimeter is shown in Fig. 1, which is of extremely simple pattern. The outer container, A, serves as a water bath, in which is mounted a cylindrical tube or pipette, B, the lower end of which is closed by a cork, C, while the upper portion is passed through the base of a small overflow font, E. Beneath the device is a flask or graduate glass of known capacity, into which the oil is allowed to flow. Means for supplying water of any required temperature, and a couple of thermometers, complete the apparatus.

When making a test, oil is put into the pipette until it overflows into the font at the top. Warm water is then supplied to the bath by means of the tap above, while the bottom tap is opened sufficiently to regulate the water level properly and yet provide a constant circulation. The temperature of the bath is brought up to 70 degrees Fahr., as noted by the thermometer, F, and is held there until thermometer, C, also registers 70 degrees, indicating that both oil and water are at exactly the same temperature. At this point a syringe is inserted in the overflow font, E, and sufficient oil removed to bring the level down to the top of the overflow in the pipette. This ensures the presence of an exact quantity of oil in the pipette at that temperature, and the withdrawal of a certain amount when the proper temperature is reached, is made necessary by a very slight increase in volume of the oil while heating.

When all is ready, the operator grasps a stop watch in one hand, and with the other removes the stopper, C. The oil is permitted to run down into the flask at the bottom until the level in the pipette comes to a mark near the bottom, when the stopper is quickly replaced and the time taken at the same instant. In the ordinary form of viscosimeter, 60 cubic centimeters are permitted to flow in this way, leaving 8 of the original 68 cubic centimeters in the glass. It is necessary to leave a small amount of oil in the pipette in order to prevent the flow from being retarded by sticking to the sides, this effect being different with oils of different bodies. The number of seconds required for the 60 cubic centimeters to flow under the conditions named, is called the viscosity of the oil.

As the rate of flow through the lower orifice must vary with the amount of oil in the pipette, a somewhat more complicated apparatus is sometimes employed for making very accurate determinations. This is shown in Fig. 2, and is so constructed that during the entire time the specified quantity of oil is flowing a constant level or "head" is maintained over the orifice.

The principle and method of operation in this case is the same as in the first type mentioned. A is the font or oil well, in which the main supply is placed, and which is in the form of an inverted cup or container, closed at the bottom with a valve, K, supported by the frame, M, so that no oil is permitted to flow from it as it is placed in the apparatus in the position shown. As soon as it is in place, however, oil flows out through the opening of the valve, K, by

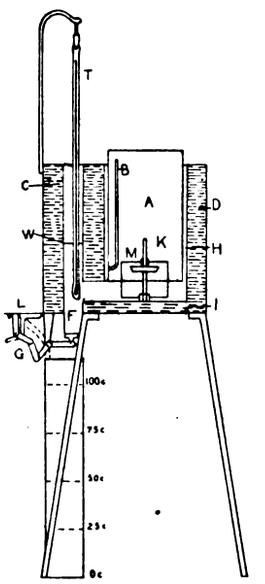


Fig. 2

the pressure of the bottom of the chamber in which the cup rests on the valve stem. Four little tubes, one of which is shown at B, are so arranged in the cup as to permit air to enter until a certain stated level is reached. At that point the rising level in the chamber in which the cup is contained, forms a seal which cuts off the air supply to the tubes, thus preventing any more oil from flowing until the level in the chamber is withdrawn.

The jacket D-C, is arranged much as in the first instance, and is designed to keep the oil at the required temperature. The thermometer, T, is suspended in the well, W, where the bulb is immersed in the oil. The stopper, F, is in the form of a valve, held by a couple of links and the spring catch, L, in such a way that upon releasing the latter the valve drops entirely out of the way, permitting the oil to flow into the receiving glass below. When the desired amount has run out the handle G is raised, shutting the valve.

Closely allied to the viscosity is the density of the oil, which is obtained by the use of a hydrometer similar to those sometimes employed in testing the specific gravity of gasolene. The readings of specific

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gravity and viscosity are the most significant tests made upon the oil. Together, they closely define its properties to the oil expert.

The effects of heat are obtained by several tests which give the "flash point" or temperature at which the oil vapor will be ignited by an open flame held a half inch above its surface; the fire test, denoting the temperature at which the oil itself takes fire; and the tendency to gum, by a test in which several streams of oils of different sorts are permitted to flow over an inclined plate heated to a stated temperature. The difference in time taken by the various samples when started at the same instant, measures the thickening or drying effect of the heat, coupled with the effect of the air.

The effect of the oil upon metal by corroding it is shown in various ways, but perhaps most effectually by a test which is within the reach of any one who has the curiosity to try it. It is merely necessary to wrap a few coarse threads taken from cotton waste, about a piece of brightly polished steel, saturating the cotton thoroughly with the oil to be tested, and then to place the sample in the sunlight in a fairly warm place. If the oil contains acids, it will tend to etch into the steel. In bad cases the effect will be noticeable within a few hours. Suitable oil or grease will show not the slightest dulling effect on the polish even after several weeks or even months of such exposure.

This test is quite an important one, because an oil containing acids will soon roughen the journals it is intended to lubricate, and will have an even worse effect upon the cylinder, under the action of the high heat. On this account it is well for the owner who is about to try a new and unknown brand of oil to make this test for himself, since it is costless, and requires no time or special apparatus. If no etching effect is shown, he may be sure that the oil is not injurious to the bearings, however well or ill it may behave in the cylinder, in respect to its lubricating and carbonizing properties. If it dulls the surface on which it is tried, within a reasonable length of time, it is not suitable for any purpose, regardless of its appearance in other respects.

When Lubrication by Hand is Advisable.

When overhauling the machine, there is danger of omitting to oil bearings which have just been cleaned with gasolene or kerosene. Because it requires an appreciable length of time for the oil to reach all bearings through the regular channels from the lubricator, there is more than a bare chance that a tightly adjusted bearing may suffer considerably when the machine is first started. On this account, as well as owing to the fact that there also is some liability on the part of the repairman to forget to adjust the oiler after an overhauling, it is very important that all bearings be oiled by hand during the process of assemblage.

NEW PROCESS FOR RUST-PROOFING

"Cosletting" a Method of Effecting Chemical Change in the Metal's Surface—Applicable to Many Uses.

Although numerous processes have been invented for rust-proofing metal, all those which have been put to the practical test possess certain drawbacks, either in the shape of unsuccessful results under certain circumstances, or else in the way of prohibitive cost from the standpoint of general all round utility. These methods range from the use of mere paints of various sorts to systems of coating with non-corrosive metals. A recently developed English process however, differs from either of these classes, in that it effects a chemical change in the surface of the metal itself, much as the outer layer is affected by the case-hardening process. It is known as the Coslettising process, and is the invention of T. W. Coslett, of Birmingham.

A lecturer before the Birmingham University Metallurgical Society recently described the process as consisting "in immersing the article in a hot phosphorized solution together with an iron compound. The surface of the iron is converted into a mixture of ferrous and ferric phosphates, and presents a pleasing dull-black appearance. This process makes the iron highly resistant to corrosion, and is being applied to all kinds of light engineering work, such as cycle frames, gun-barrels, stampings, and press work."

"The invention is of both scientific and commercial importance, since it establishes the fact that under certain conditions iron will absorb phosphorus just as it absorbs carbon in the cementation process," comments the Autocar in reference to it. "The phosprorus, however, does not enter into the structure of the metal, but only penetrates the surface to a fractional degree, yet sufficiently to render it immune from rusting influence. The inventor has clearly established this fact by the action of the process upon steel springs of the most delicate description, which when treated retain their resilient and other essential properties. That it is not a mere coating is proved by the effect of the process upon the threads of fine screws, which run just as freely after treatment as before. The accuracy even of the micrometer gauge is not impaired in any way by the Coslettising process. These and other similar experiments will substantiate Mr. Coslett's claim that phosphorus, which under other conditions has so deleterious an effect on the stability of iron and steel, yet is absolutely harmless when incorporated under proper control.

"The articles intended for treatment are immersed in a chemical bath for three or four hours, which is maintained at boiling point. They are then withdrawn and placed in a stove or other drying apparatus for a few minutes at a temperature of 212 degrees Fahr. They are then oiled, and the process is complete. The cost of the solution is less than a farthing (½ cent) per gallon, and the utensils employed are of the crudest description.

"It will be seen that the process is extremely simple to manipulate, all that is required being an enamelled iron or cast iron vat for containing the solution which is kept at boiling point by means of a Bunsen burner or other source of heat. When the solution is boiling the metals intended for treatment are immersed, and after a lapse of three of four hours are withdrawn, dried, and oiled. This completes the whole process."

Already one firm of English motor car makers is contemplating the adoption of the process under license from the patentee. It is planned to apply it to such exposed parts as are sometimes plated and sometimes merely polished, and also to panels and wings, which now are either leaded or tinned. This will prevent rusting and also, it is hoped, help to develop a higher finish. A project is even entertained of treating tire rims in this way to prevent them from rusting when more or less scarred from successive tire changes. The possibility of applying the system successfully in this connection remains to be demonstrated, however, as the upper limit of temperature which metal is processed will stand after treatment, has not been determined. According to one investigator it will stand a dull red heat and not lose color. The black tone disappears as the surface oil burns off, to be sure, but on being wiped over with oil again it burns black and sets black, he maintaines.

Special Spark Plug for the Magneto.

Because of the relatively great current strength of the energy delivered in the spark from a high tension magneto it has been found that improved running conditions may be obtained by the use of a special form of spark plug instead of the standard type commonly used with the battery and coil system. To fulfil the demand which is thus created a new "Soot-Proof" plug has been developed by C. A. Mezger, Inc., New York, which affords the required reinforcement in the matter of insulation and also has four sparking points, instead of the one employed in the regular "Soot-Proof" plug. These points are stamped from a single piece which is spun into the base of the shell of the plug, and are spaced 1-32 of an inch away from the central electrode. The insulator, which is of strong, hand turned porcelain, has a squared internal socket into which the rectagular shoulder of the electrode fits. As a result of this arrangement there is no danger of loosening the spindle when adjusting the terminal connection. The body of insulation is unusually large, and special provision is made for sealing all joints gas-tight.

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BROADER SHARING OF ROAD MONEY

Jersey's Automobile Income to be More Generally Distributed—All Improved Roads to be Benefited.

An important and far reaching change in the distribution of revenue derived from the taxation of automobiles in New Jersey will result from the operation of the Frelinghuysen law as amended at the last session of the legislature. State Road Commissioner Frederick Gilkyson has received from Attorney-General McCarter an opinion which holds that under the amendments the income derived from motor vehicles must be divided among the various municipalities of the State in proportion to the mileage of improved roads in each. In the past the revenues from this source have been apportioned only on the basis of roads in which the State shared the burden of construction.

The attorney-general holds that it was the evident intention of the last legislature to distribute the funds for the repair of all improved roads of a certain character, regardless of who paid the original cost.

"My construction of Section 37, of Chapter 304, of the laws of 1908," says the attorney-general, "is that the funds you receive from the State treasurer are to be appropriated by you for the repair of all improved roads of the character designated in the act, whether improved by the counties, towns, townships, boroughs, villages or other municipalities. The design of the act seems to have been to apply the funds to the repair of all improved roads, whether they have received State aid or not, and of course roads that have been improved by municipalities other than the counties are quite as apt to be used by motor vehicles and to need repairs as roads in the counties that have been improved by the counties themselves."

The amendment of 1908 will cause quite a shake-up in the distribution of the money turned into the State by automobilists. Heretofore the lion's share went to the counties which had invoked the greatest amount of State aid in building their roads. Burlington County, for example, received as its share nearly $9,000, while Union and Hudson, whose roads were built without State aid, received lass than $200 apiece.

According to the last report of the road commissioner, there are in the State 1,231 miles of roads built under the State aid law. Toward the construction of these the State has contributed $2,283,007. Improved roads built in the counties without State aid aggregate 800 miles. In order to determine the amount to which each municipality will be entitled, it will be necessary to obtain reports from about 473 municipalities in the State showing the total milage of improved roads in each. It is estimated that the receipts this year from the motor Vehicle department will be about $82,000, or nearly $26,000 more than last year.

Under the new method of distribution Burlington, Mercer, Middlesex, Monmouth and other counties which have invoked the State aid law most freely, will be the losers, while those counties which have built their own macadam roads will be the proportionate gainers. Improved roads under the motor vehicle act do not include streets paved with cobble stones, Belgium block or asphalt.

The distribution of the automobile fund in 1907 was as follows: Atlantic, $3,896.43; Burlington, $8,850.75; Camden, $3,724.60; Cape May, $1,158.66; Cumberland, $62.96; Essex, $4,598.27; Gloucester, $3,864.70; Hudson, $125.91; Mercer, $5,987.02; Middlesex, $6,015.14; Monmouth, $4,345.89; Morris, $3,122.15; Ocean, $1,695.63; Passaic, $2,540.71; Salem, $1,146.95; Somerset, $3,104.61; Sussex, $341.50; Union, $176.98; Warren, $1,719.98.

Road Destruction by Two-Wheeled Carts.

Motorists who venture into Mexico and find the roads beyond power of description have discovered an offending cause in the ever present two wheeled cart. The wear which these vehicles bring upon the road is said to be far in excess of that occasioned by any other element of traffic. When one of the wheels strikes an obstacle, it pauses momentarily, while the other swings part way around it, incidentally scraping away a section of the road surface. A similar effect results with the first wheel as soon as the obstruction has been surmounted. In this way the heavy wagons leave a zig-zag trail of dismantled road behind them. In addition to this, the wear and tear on the draft animals occasioned by these side swayings, will, it is thought, ultimately lead to the suppression of these relics of antiquity. Until such time, however, it is thought that well preserved roads will remain an impossibility.

Salvage Corps to Have Motor Wagon.

After thoroughly studying the use of automobiles as applied to the service of salvage corps, the Underwriters Protective Association of Newark, N. J. have appropriated $6,000 for the purchase of an automobile salvage corps wagon. Basing their calculations on the time made by the machines now in use in other cities, the Newark underwriters figure that a motor car can cover a certain distance in four minutes which takes eleven minutes to travel with the horse drawn vehicle.

Memorial for an Early Motor Builder.

A memorial tablet has been placed on the house in Malchin, Mecklenburg, Germany, in which Siegfried Marcus was born. To Marcus is given the credit of building the first gasolene motor car constructed in Europe. The car was built in 1875 and now is in the possession of the Austrian Automobile Club.

HITTING IT RIGHT BY CHANCE

One of Many Incidents Illustrating the Haphazard Methods of Some Drivers —Sometimes They are Lucky.

It has been advised frequently that the use of non-skid shoes on opposite "corners" of the car tended to unsatisfactory and abnormal running conditions. This is because the difference in diameter of the non-skid and non-skidless wheels, causes the differential to work continually and also interferes with the steering more or less. The old theory that a car was less liable to skid when so equipped than when both non-skids were on the rear wheels is no longer advocated by well posted drivers. But sometimes there are other reasons for following the practice, as was evidenced by a conversation which recently was overheard.

A bystander inquired of the driver of a car which had just drawn up to the curb, why he carried steel shod tires on opposite sides, front and back; the driver replied that "it just happened so."

"But don't you think it keeps you from skidding that way?" continued his questioner.

"No, I don't know that it does."

"Then why——"

"Oh, it just happened there were 'sand holes' in those two tires, that's all. I never thought about the differential business, but it was easier putting the non-skid in front than changing over the front tire to the back and then putting it on, and I couldn't see that it made any great difference either way."

How Motorists Generally Obey the Law.

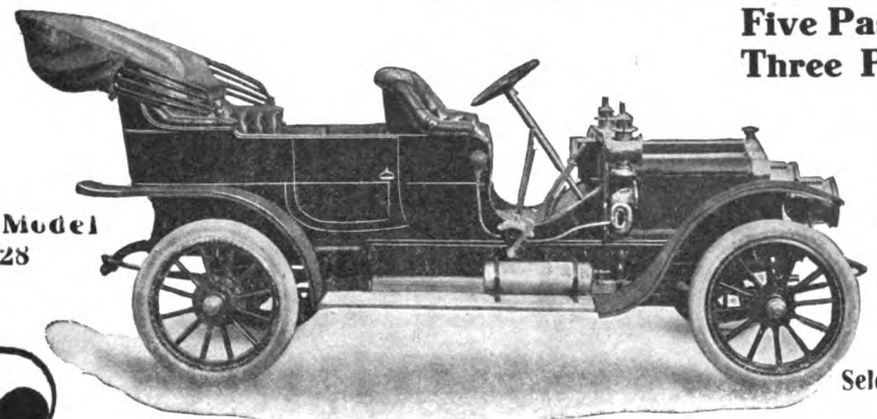
In view of the probable passage of a great many motor vehicles through Shrewsbury, Mass., on Saturday, 6th inst., the day of the hill climb at Dead Horse hill, the selectmen of the town placed two constables on the main road between Shrewsbury and Worcester to enforce the speed law. According to the report of one of these officers only a few of the 1,000 or more motor vehicles that passed him were traveling very fast, and he warned but one operator. One vehicle, however, bearing the number "C 201 M" traveled, as he estimated it, a quarter of a mile in 17 seconds.

Bermuda Excludes all Automobiles.

Bermuda has barred automobiles by legislative enactment which has received the approval of the governor of the province. The probability of such action being taken was stated in the Motor World early in the year when agitation against automobiles was begun by residents and visitors. The new law revokes the permission to run motor vehicles which had been granted by a previous law.

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THE SELDEN CAR



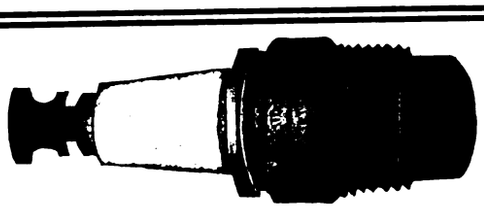
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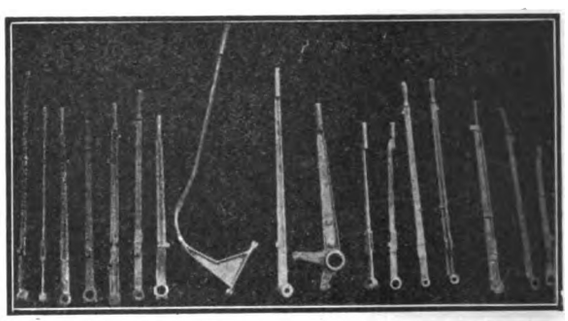
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The Week's Patents.

883,552. Clutch Mechanism. Carlton R. Mabley and Gustave E. Franquist, New York, N. Y.; said Franquist assignor to Smith & Mabley, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 9, 1904. Serial No. 188,327.

1. In an automobile, the combination of a driving gear and a shaft comprised in part by a clutch member, a sleeve supporting said clutch member, a hollow shaft on which said sleeve is adapted to slide longitudinally, a spring device contained within the said hollow shaft for moving the clutch member in one direction, the said hollow shaft being connected at each end to other sections of shafting and in alignment therewith, the said hollod shaft and its supported parts beinb removably secured by such connections in such manner that the said hollow shaft and its supported parts may be uncoupled and removed from the machine without disturbing the alignment of the remaining portions of the shaft.

833,554. Sparking Device. Henri Maillard, Paris, France. Original application filed Jan. 30, 1905, Serial No. 243,371. Divided and this application filed Oct. 24, 1906. Serial 340,422.

1. In an electromagnetic sparking device, a two part iron core one of said parts beinging in yielding engagement with the other, said movable part supporting a rod of non-oxidizable metal centrally reinforced with a rod of heat refractory metal, said second rod having a tip of non-oxidizable metal, a second terminal, and a support for the same out of metallic contact with said core.

883,572. Pneumatic Tire Shield. Frederic W. Savage, Granville, N. Y. Filed Nov. 10, 1905. Serial No. 286,731.

1. A removable shield for pneumatic tires, composed of interjoined links formed of round wire and sufficiently twisted to form a substantially unbroken and comparatively flat surface, adapted to cover the tire.

883,582. Device for Automatically Controlling Lamps on Vehicles. John W. P. Smithwick, La Grange, N. C. Filed March 22, 1907. Serial No. 363,792.

1. The combination with a vehicle frame, a front axle, stub spindles pivoted to the ends of the axle, wheels on the spindles, rearwardly extending arms on the spindles, a rod connecting the arms, and means for manually controlling the pivotal movement of the spindles, of brackets secured to the frame in front of the axle and each having an upright member provided with a vertical opening, bifurcated standards mounted to turn in the openings of the brackets, lamps pivoted on horizontal pivots between the members of the standards, downwardly curved arms rigidly secured to the lower ends of said standards, a rod connecting the arms of the standards, said rod comprising two sections pivoted at one end to the arms and having their other ends screw threaded ends of the rods, adjustable boxes, one on the said rod and the other on an arm of one of the spindles, and a rod extending diagonally across the axle and having its ends pivoted to the said boxes.

883,658. Friction Clutch. Henry Lutz, Denver, Colo. Filed Jan. 23, 1907. Serial No. 353,643.

1. The combination of a driving shaft, a clutch wheel mounted to rotate therewith and provided with open ended casings, plungers slidable in said casings and provided at their outer extremities with friction faces, a sleeve slidable on the shaft, the said levers having approximately the shape of bell cranks, one arm of each bell crank engaging the sleeve, while the other arm is provided with a weight, substantially as described.

883,710. Mud Wing for Motor Vehicles. George Frentzen, Aix-la-Chatpelle, Germany. Filed Jan. 16, 1906. Serial No. 296,401.

1. A mud wing for motor vehicles consisting of a rigid body substantially inclosing with its longitudinally curved part the rearward upper quadrant of a front-wheel of a motor vehicle, and transversely bent to terminate in an integral member for securing said mud wing to the vehicle body and to admit of said front wheel taking up any desirable angular positions within said body.

883,732. Friction Clutch. Van Zandt M. Moore, Cleveland, Ohio. Filed Jan. 15, 1906. Serial No. 296.017.

1. In a friction clutch, the combination of a pair of members having conical surfaces inclining in opposite directions, said members being rotatable together but movable toward and from each other, a spring tending to thrust said members into clutched position, a third member having two conical surfaces one of which encircles the other, rotatable together and adapted to be engaged by the respective members of the pair under the influence of the spring, and mechanism for moving the members of the pair in opposition to the spring to release the third member.

883,735. Driving Mechanism for Motor Carriages. Alfred B. Morse, South Easton, Mass. Filed Sept. 26, 1903. Serial No. 174,782.

1. Driving mechanism for a motor vehicle, comprising an axle, a power transmitter mounted thereon, two gears carried by said axle for operating said transmitter, and balance levers pivoted on the plungers, and clutching mechanism including two actuating means, located at the opposite sides of said transmitter and connected together at the axle for coupling one or the other of said gears and said transmitter as desired and a single operating device for said two connected actuating means.

883,740. Spray Carburetter. Peter A. Poppe, Coventry, England. Filed Jan. 15, 1907. Serial No. 352,358.

1. In combination, a jet nozzle, means for maintaining the fuel at a suitable height therein, a mixing chamber having an inlet thereto and an outlet therefrom, a rotatable plug cock arranged in said chamber and adapted to control said inlet and said outlet, a jet nozzle controlling device connected thereto, and an adjustable cylinder arranged around said plug cock with holes in said cylinder corresponding with said inlet and to said outlet of the mixing chamber, substantially as set forth.

883,763. Tire for Vehicle Wheels. James E. Tourtellotte, Hartford, Conn. Filed May 28, 1906. Serial No. 318,997.

1. A tire composed of elastic material

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and having sloping sides gradually tapering from the inner edge to a dimension of less width nearer the outer edge of the wheel, a reinforcing strip composed of practically unyielding material and having side parts conforming to and embracing the sides of said tire, the entire inner surface of said reinforcing strip being vulcanized to the tire, and means for securing said reinforcing strip to the rim of a wheel.

883,774. Power Transmission Device for Motor Vehicles. Frederick C. Avery, Harvey, Ill. Filed March 9, 1904. Serial No. 197,289.

1. In a power transmission device, a friction disc, two wheels in friction contact with said disc and rotating in opposite directions, two shafts driven by said wheels, a gear attached to each of said shafts, two driven shafts, two driven gears mounted thereon, two swinging hangers mounted concentric with the two first mentioned shafts, said hangers supporting the driven shafts, two swinging brackets, a single intermediate gear attached to one bracket, two intermediate gears attached to the other bracket, and said brackets arranged to swing in order to move the intermediate gears in and out of contact with the driven gears as herein shown and described.

883,835. Brake and Clutch Operating Mechanism for Automobiles. Charles Schmidt, Cleveland, Ohio, assignor to the Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed March 29, 1906. Serial No. 308,759.

1. In an automobile, the combination of the two rear wheels having cylindrical braking surfaces and brakes, which engage with the braking surfaces on said rear wheels and are provided with operating levers, with an equalizing bar, supports secured to the automobile frame for sustaining said equalizing bar and permitting it to move forward and backward, links connecting the brake operating levrs with said equalizing bar, a draft device connected with said equalizing bar, and mechanism for operating said draft device.

883,870. Speed Changing Mechanism. Walter O. Foss, Philadelphia, Pa., assignor to Direct Motor Drive Mfg. Co., Philadelphia, Pa. Filed Dec. 5, 1907. Serial No. 405,188.

1. In combination, a power shaft, a driving disc, a pinion, an annular member mounted upon and rotatable about the periphery of said driving disc and geared to said pinion, a clutch adapted to lock said annular member to said driving disc, free gears mounted upon said power shaft and geared to said pinion, and a clutch mounted on and rotating with said power shaft and adapted to positively engage either of said free gears, substantially as described.

883,973. Lamp Bracket. Edwin M. Rosenbluth, Philadelphia, Pa. Filed June 21, 1906. Serial No. 322,666.

1. A lamp bracket comprising means arranged to detachably support a lamp; and means, comprising a rod, adjustable in the direction of its length toward and from said lamp, and arranged to detachably support a license panel, which is also adjustable with respect to said rod, said supporting means being so co-operatively connected that said panel is illuminated by said lamp, substantially as set forth.

883,981. Gas Generator for Explosive Engines. Henry K. Shanck, Cleveland, O., assignor to The Euclid Motor Company, Cleveland, O., a Corporation of South Dakota. Filed Jan. 23, 1906. Serial No. 297,423.

1. The combination in a quick speed explosion engine, of means for vaporizing the explosive fluid and for commingling the same with air to a predetermined degree, comprising an elongated tubular commingling chamber, a nozzle for the fluid at one end thereof arranged to discharge the fluid longitudinally of the chamber, a needle valve having a shoulder in said nozzle, means for obtaining a minute adjustment of said valve, a lateral air inlet in said chamber adjacent to said nozzle, a valve in said air inlet, a governor operatively connected with a rotating part of the engine, and coordinating instrumentalities for operating the valves of the fluid nozzle and air inlet whereby an unvarying proportion of aid and fluid is obtained, said co-ordinating parts being operatively connected with and controlled by said governor, substantially as described.

884,053. Explosive Engine. Henry L. F. Trebert, Rochester, N. Y., assignor to Brownell-Trebert Company, Rochester, N. Y., a Corporation of New York. Filed March 20, 1905. Serial No. 250,908.

1. In an explosive engine, the combination with a cylinder having a head provided with two apertures, and gas inlet and exhaust pipes leading over the head at opposite sides thereof in proximity thereto, and communicating with the apertures therein, of valves controlling said pipes, stems thereon extending upwardly through the pipes and mechanism located between said pipes and co-operating with the valve stems.

884,117. Motor Vehicle. Alexander Winton, Cleveland, Ohio. Filed May 25, 1903. Serial No. 158,714. Renewed Oct. 1, 1907. Serial No. 395,369.

1. In a motor vehicle, the combination of a horizontally and transversely arranged engine frame, side sills longitudinally arranged and intermediately connected to opposite ends of the engine frame, a water cooler connecting and constituting a cross-beam or sill for the forward projecting ends of the side sills, and supporting driving and steering axles connected with the oppositely projecting ends of the said side sills.

884,118. Lubricator. Alexander Winton, Cleveland, Ohio. Filed Nov. 12, 1904. Serial No. 232,489.

1. A lubricator including an oil chamber, a rotatable feed roll located therein, the oil chamber having an oil passage way extending thereinto, an oil gatherer adapted to gather the oil from the feed roll and deliver it to the oil passage, means for feeding oil to and maintaining it at a level within the chamber below the gatherer and the inlet end of the passage way, and an adjustable oil remover located adjacent the surface of the roll and at a point in advance of the said gatherer in respect to the direction of rotation of the feed roll.

884,172. Variable Speed Gearing. Sherman T. Lewis, Milwaukee, Wis., assignor of two-thirds to Retta Pierce Davenport and Everett C. Rockwell, Chicago, Ill. Filed April 13, 1907. Serial No. 367,911.

1. In transmission gearing, a driving member, rotatable independently thereof, an intermediate member, gear connections between said driving and driven members, part of said gear connections being mounted on said intermediate member, a stationary member and a controlling member permanently connected to said intermediate member to thereby rotate therewith or prevent it from rotating, said controlling member being adapted to occupy a plurality of positions, in one position in engagement with said driven member to thereby cause it and the driving member to rotate at equal speeds, and in another position in engagement with said stationary member to thereby arrest said intermediate member and cause the motion of the driving member to be transmitted to the driven member by way of said gear connection, in combination with means for shifting said controlling member to its different positions, said shifting means comprising a hand operated member having beveled surfaces co-operating with beveled surfaces on said stationary member.

884,193. Vehicle Steering Mechanism. William McGlashan, Cleveland, Ohio, assignor to the Winton Motor Carriage Company, Cleveland, Ohio. Filed Nov. 12, 1904. Serial No. 232,455.

1. An improved vehicle steering mechanism, comprising a suporting casing, a rotatable steering post having a longitudinal bearing and also a transverse thrust-bearing in the casing, a longitudinally movable sleeve located within the casing and having internal screw threads, the steering post having external screw threads engaging the threads of the sleeve, means for preventing the rotation of the sleeve, and a connection between the sleeve and the steering wheels of the vehicle.

884,201. Fender and Brake Attachment for Automobiles. John O'Leary, Cohoes, N. Y., assignor of one-half to Edward Penrose, Cohoes, N. Y. Filed Dec. 24, 1907. Serial No. 407,881.

1. In an automobile, car or the like, the combination with the front axle, front wheels, and movable connections carried by the axle and to which the wheels are attached, of a fender secured to the said movable connections and having its rear portions located within the sides of the wheels.

884,294. Tire Sealing Device. George H. Phillips, Plymouth, Mass., assignor of one-half to himself and one-half to George F. Soule, Plymouth, Mass. Filed Oct. 30, 1907. Serial No. 399,818.

A cealing device for pneumatic tires comprising a sealing member having a shoulder, adapted to fit against the wheel rim, and a comparatively thin edge, and means adapted to embrace the tihe and wheel rim for securing such sealing member in place.

12,777. Reissue. Vehicle Wheel Rim. Frank A. Seiberling, Akron, Ohio. Filed March 3, 1908. Serial No. 419,056. Original No. 765,044, dated July 12, 1904. Serial No. 192,947.

1. A vehicle wheel rim of the class described, consisting of a base rim and a band capable of contraction on and a reversal of position around said rim, one of the sides of said band being formed into a hook shape and the other with an approximately vertical side and fashioned to engage, in alternation, the clencher and inextensible edge tires, substantially as and for the purpose described.

884,488. Running Gear for Vehicles. Harry W. Hancock, Chicago, Ill. Filed Sept. 23, 1904. Serial No. 225,628.

1. In a running gear for vehicles, in combination, a bed frame; and means for supporting said bed frame comprising a spring at each end of said bed frame said spring being attached at each of its ends to said bed frame, a wheel carrying arm pivottally connected intermediate its ends with each of said carrying springs and adapted to support an axle at one end, and means for yieldingly connecting the other end of each of said carrying arms with said bed frame.

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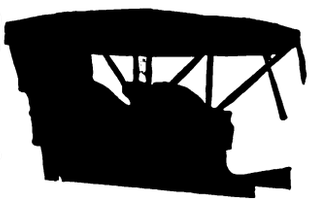
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1788-1790 Broadway, cor. 58th St. New York City.
"Keep your eye on Continentals"

SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies



SPRINGFIELD METAL BODY CO.,
306 Birnie Ave.,
Springfield, Mass.



Steel Tires

Full of Air.
Tire expense cut in two.
Cannot Blow Out
Rim Cut
or Puncture
As Flexible as Rubber
Anti-Skid
Thousands in use.

Kimball Tire Case Co.
172 Broadway
Council Bluffs, Iowa

SMITH AXLES

For Light Runabouts
OUR
TYPE "C" REAR AXLE

Bevel Gear Drive
Roller and Ball Bearings
Internal Expansion Brakes

Drawings and Prices on Request.

A. O. SMITH CO.
243 Clinton Street, MILWAUKEE

THE MAYO RADIATOR CO.
HIGH GRADE
NEW HAVEN, CONN.



DECARBONIZER

The Great Gas Engine Cleaner
Increases power 20-25 per cent. and removes Carbon from all parts of engine. Sample Quarts $1.50. Discount to the trade. Agents wanted. 50,000 Users guaranteed.
General Accumulator & Battery Co.
140 Second St., MILWAUKEE, WIS.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO.,
Cleveland, Ohio.

Users of INVADER OIL



THE OIL THAT GRAPHITIZES
are responsible for its popularity
YOU NAME THE CAR
WE'LL
NAME THE GRADE
MADE ONLY BY
CHAS. F. KELLOM & CO
128 Arch St., Philadelphia
Boston Branch:
Motor Mart, 87 Church St.
New York Agents:
Garford Motor Car Co.,
1540 Broadway.

KEEP YOUR EYE ON '08 Continental CARS
MADE IN NEW HAVEN

For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

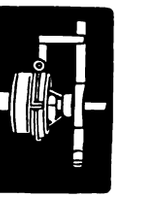
The Great Smith Car

SMITH AUTO. CO., MFRS.
TOPEKA, KANSAS

THE SAME OLD STORY
(New every race)
EISEMANN MAGNETO
VICTORIOUS AT PALERMO IN SICILY
Voiturettes, WON Voiturette, Leon
The Targa Florio BY Driver, Guippone.
Equipped with an Eisemann Magneto
LAVALETTE & CO., 112 W. 42nd St., New York

The Ball Transmission FOR Automobiles & Motor Boats





NEW YORK GEAR WORKS.
56 GREENPOINT AVE., BROOKLYN, N. Y.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find $2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of _____

Name _____

Address _____

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This is the

PULLMAN



4-40 Roadster. Price, $3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

YORK MOTOR CAR CO.,
York, Pa.

Rainier

1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St., New York.

Exclusive LOGAN Features

1—All transmission gears and differentials of Krupp's chrome nickle steel.

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chillicothe, O.

Before You Buy a Car

telephone a Mitchell agent and tell him you want to be shown the "silent argument" the Mitchell offers in demonstration. He'll be glad to show you—call him up—it's worth money to you if you are thinking of buying an automobile. (No obligation.)

MITCHELL MOTOR CAR CO.,
283 Mitchell St., RACINE, WIS.

THE "AURORA"

Runabout $775—20 H. P.
Commercial Wagon $1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS, Aurora, Ill.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."
2-Cylinder and 4-Cylinder
Runabouts, Roadsters, Touring Cars,
15 H. P., 24 H. P., 35 H. P.
Prices, $850, $1,250, $1,500, $2,000.
JACKSON AUTOMOBILE CO., Jackson, Mich.

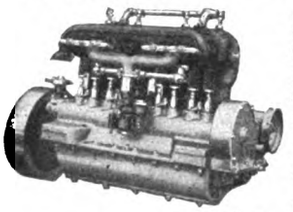
DIAMOND CHAINS

I drive their cars more miles per dollar cost than any others

TRADE MARK

DIAMOND CHAIN & MFG CO.
150 W. Georgia St.,
Indianapolis, Ind.

"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade two and four cylinder motors, 10 to 45 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanship, efficient, durable and simple. Also clutches and transmissions. Send for catalogue.

CONTINENTAL MOTOR MFG. CO, Muskegon, Mich.

K. FRANKLIN PETERSON, Western Representative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

THE MARMON

"A Mechanical Masterpiece"

For catalog, address Dept. 16.

NORDYKE & MARMON CO.
(Estab. 1851) INDIANAPOLIS, IND.

TRUFFAULT-HARTFORD
Trade
SHOCK ABSORBER
Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for catalogue, Department D.

HARTFORD SUSPENSION CO.,
E. V. Hartford, Pres. 145 Bay St., Jersey City, N. J.

Garford

Address
Eastern Inquiries
Garford Motor Car Co.
of New York,
1540 Broadway,
New York City.

Western Inquiries
Garford Motor Car Co.
of Cleveland,
1372 East 12th St.,
Cleveland.



THE WATER WAY
BETWEEN
BUFFALO AND DETROIT

The D. & B. Line Steamers leave Buffalo daily at 5:30 p. m., (eastern time) and Detroit week days at 5:00 p. m., Sundays at 4:00 p. m. (central time) reaching their destination the next morning. Direct connections with early morning trains. Lowest fares and superior service to all points west.

Rail Tickets Available on Steamers

All classes of tickets sold reading via Michigan Central, Wabash and Grand Trunk Railways between Buffalo and Detroit, in either direction will be accepted for transportation on D. & B. Line Steamers.

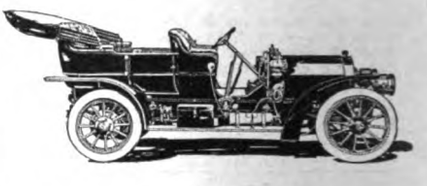
Send two cent stamp for illustrated pamphlet and Great Lakes Map.
Address L. G. Lewis, G. P. A., Detroit.

Detroit & Buffalo Steamboat Co.

PHILIP H. McMILLAN, VICE PRESIDENT. A. A. SCHANTZ, GEN'L MANAGER.

PENNSYLVANIA

"FIFTY"



The best car that America has yet produced.

Pennsylvania Auto Motor Co.

BRYN MAWR, PENNSYLVANIA

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO.
Buffalo, New York.

SIMPLEX CARS
Bodies Repaired, Trimmed and Painted.
Chassis Repair Department.
J. M. QUINBY & CO.
Automobile Body Builders.
Newark, N. J.



THIS "GOTHAM STA-RITE"

is equal to any $1 50 plug. Has big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price—$1.00.

THE R. E. HARDY & CO., 25 West 42d St, New York City

To Owners of Cars Costing Over $1800

Add the neat, snappy little Brush $500 Runabout to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work.

BRUSH RUNABOUT COMPANY, Detroit



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts

COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.

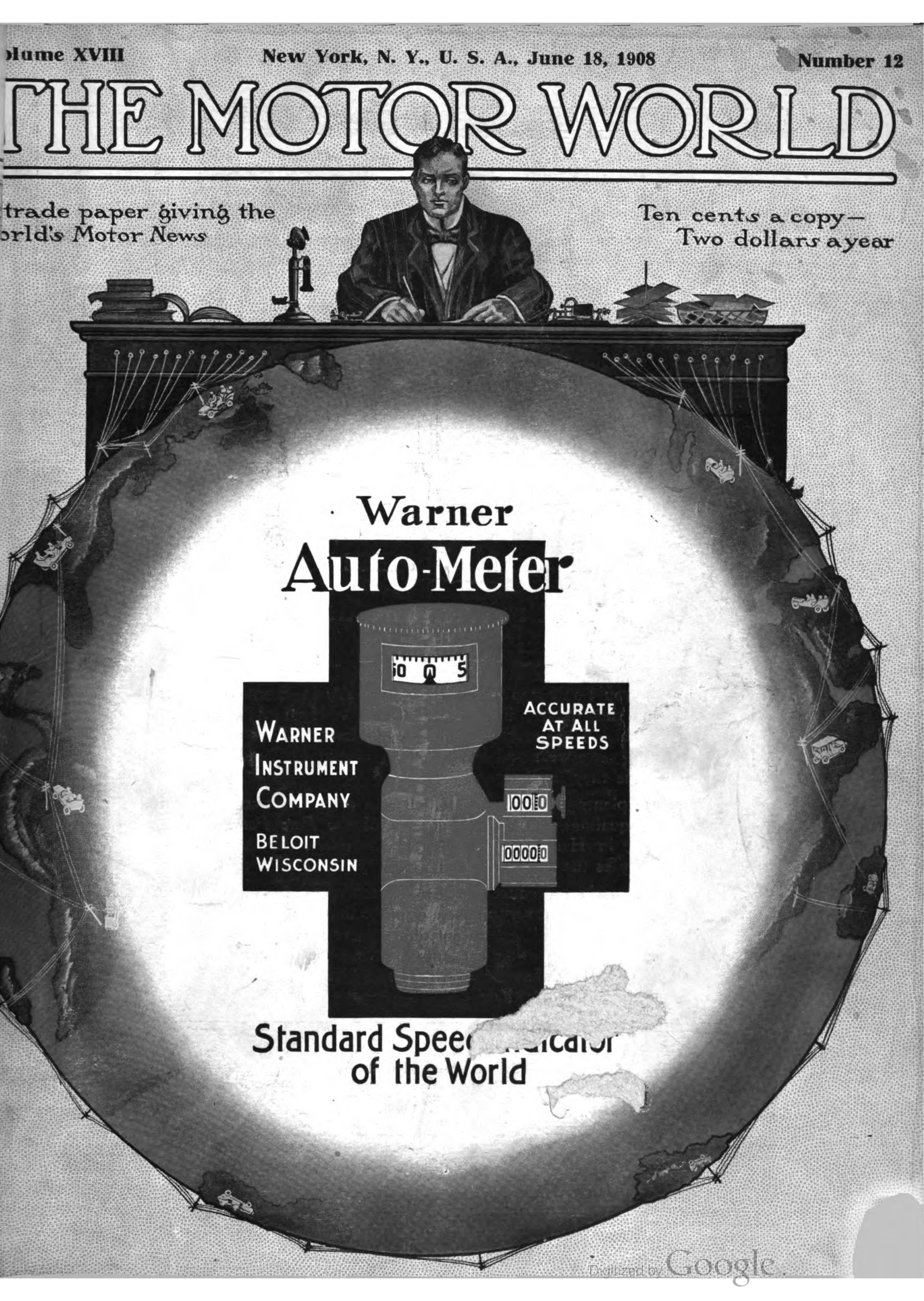
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olume XVIII New York, N. Y., U. S. A., June 18, 1908 Number 12

THE MOTOR WORLD

trade paper giving the
orld's Motor News

Ten cents a copy—
Two dollars a year



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They Ride Easier
They Save Your Car
They Last Longer

HARTFORD TIRES

TRADE MARK

"The tire with the doubt and the risk left out"



¶ If owners would only stop to consider that *quality* in an automobile tire means more than longer life, the demand for Hartford Tires would increase tenfold. The luxuriant resiliency of Hartford Tires makes your car ride easy; saves wear and tear and jar on the car, and saves you money because they last longer.

¶ There are plenty of tires made to sell at a price that sometimes have fair wearing qualities, but because of lack of the *Pure Para*, of which there is more in Hartford Tires than in any other, they are "dead" and practically as hard on a car and its occupants as solid tires.

¶ The trade marks reproduced in this advertisement are your protection and your guarantee of the very pinnacle of protection in automobile quality; and remember "quality" means not only longer life, but "resiliency," which means an easy riding car and a saving on the car which will offset fifty times the difference in first cost of Hartford Tires over the so-called "just as good" kind.

HARTFORD RUBBER WORKS CO., HARTFORD, CONN.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Tryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES– Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Salt Lake Hardware Co., Salt Lake City; Compania Mexicana de Vehicalos Electricos, City of Mexico.

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FRANKLIN Automobiles

How much power should an automobile have?

The Franklin 4-cylinder Type D automobile has 28 horse-power—7-horse-power to a cylinder; and that carries five people 45 miles an hour.

Many 4-cylinder automobiles—some of them carrying only five passengers—have 40 horse-power and upward. That is, every explosion gives a 50 per cent harder shock to the crank-shaft and the whole transmitting mechanism than you get in Type D.

Of course the whole machine has to be built bigger and heavier to stand this increased shock. The extra weight uses up a good deal of the extra power. What is left gives you a little more speed on fine smooth roads. But you can't go any farther in a day; because a heavy automobile is neither comfortable nor safe to run at speed on American roads.

So what do you get out of a bigger-powered 4-cylinder machine than Type D?

You can't use enough of the extra speed to give you more touring-ability. And the extra weight makes you pay outrageously for gasoline and tires.

If you want a high-powered automobilethe Franklin Type H gives you 42 horse-power properly balanced with six-cylinders. There's no shock at all. It carries seven passengers 55 miles an hour, and it only weighs 2,600 pounds. Think of that! Less than the average 5-passenger, 4-cylinder machine. And it costs less to own; yet no automobile of any power has more touring-ability than this Type H.

No jolting from the roads, either. The Franklin laminated wood frame and 4 full-elliptic springs absorb the road-jar. This makes easy-riding both for the passengers and the machine. With their light-weight and high-grade construction the Franklins are the longest lived of all automobiles. Depreciation-cost is low; running-cost is low. And you get the good of all the power all the time.

What's the sense of paying big up-keep charges for weight and power that you can't use?

Write for the catalogue describing Franklin models

16 h. p. 4-cylinder Runabout $1,750	28 h. p. 4-cylinder Touring-car or Runabout... $2,850
16 h. p. 4-cylinder Touring-car.. 1,850	42 h. p. 6-cylinder Touring-car or Runabout... 4,000

Prices f. o. b. Syracuse

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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Large Sales

make it possible for us to import **THE CELEBRATED BRAMPTON CHAINS** from **ENGLAND** (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped **"BRAMPTON."**

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller	$1.00 per foot.
1 x ⅝ x ⅝ roller	1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat. etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo.
202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

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"Firestone"

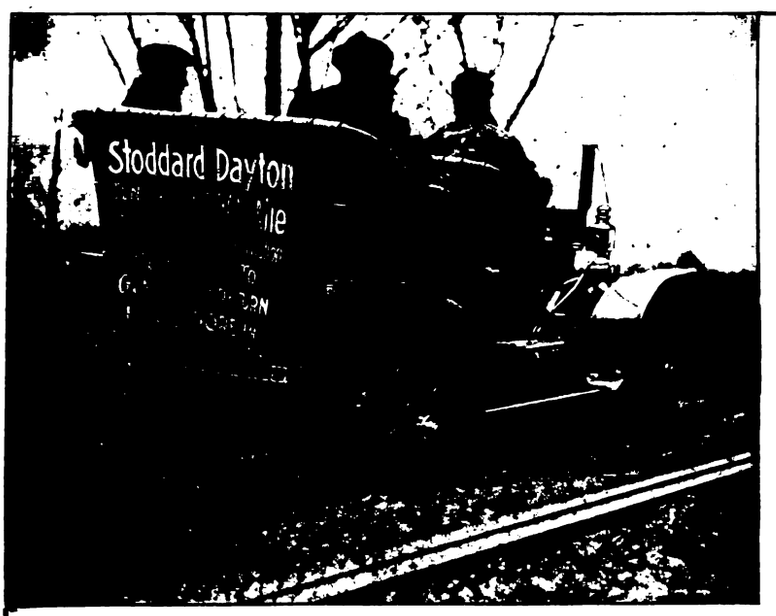
Pneumatic Tires

"THE TIRES OF STERLING QUALITY"

are today placing the highest standard for Pneumatic Tires, just as Firestone Solid Tires are the standard by which all solid tires are compared. In their manufacture they are given the very best workmanship and the closest possible inspection, insuring absolute satisfaction to the user.

WE FURNISH TIRES TO FIT ANY RIM.
Branches and Agencies Almost Everywherere.

FIRESTONE TIRE & RUBBER CO., Akron, Ohio



The Severest Tests

have demonstrated time and time again that the principles employed in

Timken Roller Bearings

are the only correct ones that insure perfect transmission of all power to traction use, eliminating both friction load and end thrust.

A Stoddard Dayton Stock Car equipped complete with **Timken Roller Bearings** finished April 12th, a ten-day century run, 1,000 miles over the roughest roads with all adjustments sealed, something impossible for a car equipped with the ordinary type of bearings to perform. This car, as do all cars of the **Stoddard Dayton** make, carries a full equipment of **Timken Roller Bearings,** as tests made under the most adverse and severe conditions have proven them an economical factor in the saving in wear and tear from strain alone.

And these are some of the reasons why more than **65 per cent.** of all the makers of high grade American Automobiles and over **90 per cent.** of the Commercial Truck builders are now using them. Are you? If not, won't you let us give you some figures that prove. These are yours for the asking.

The Timken Roller Bearing Axle Company, Canton, Ohio
Branches: 10 East 31st Street, New York 429 Wabash Avenue, Chicago

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The "Maxwell"

THE RUMOR SEASON

is here again, just as it always comes with the regularity of the malaria germ, or the hay-fever, or the June-bug; only it becomes more virulent as it gets older.

The Whooper Company—so Dame Rumor says—will have a world-beater in the shape of a motor that has more cycles to it than you have fingers and toes, to sell at —$. Just wait and see.

The Spouter Company has something up its sleeve that will be a combination of features as varigated as the ingredients in a mince pie, to sell at — $. They will show you later.

The Holler Company has a new startler of the wait-till-we-show-you-and-get-left kind, a conglomeration of metals so diversified as to make the most enterprising experimenter in the mixer of metals quit his job in disgust, and it will sell at — $. A lick and a promise.

And so it goes on—if you have been in the business long enough you will know the story.

Not so facetious, but similar in trend, are the reflections as one scans the horizon of trade promises. I have been asked what we are going to do, and when I started to write this ad it was to give the answer:

We have found that with Maxwell principles of automobile construction and with honest manufacture and decent selling methods old terra firma is a good enough place to do business on and we are going to stay on earth, saving ourselves the trouble to come down again after the soaring flights of fancy in which some of our friends now indulge.

We are in the automobile business for the profits that are in it, and we are satisfied with the results. It pays to build the only good moderate priced automobile. Our dealers are satisfied, for they, too, find legitimate effort rewarded with a legitimate profit. Maxwell owners are satisfied, because they know that they possess a car that will give satisfactory service at minimum expense, every day in the year, and that looks as stylish and imposing—without extra charge for the style and imposition—as the highest-priced cars made anywhere. Being built upon well-tried design and honestly made they are free from the find-me-out-later-on handicap of some other manufacturers.

We will sell Maxwell cars, some ten thousand of them, at legitimate prices—prices high enough to give to our dealers and to ourselves a legitimate profit and low enough to give to every purchaser the full value of his money.

The only change we will make will be in the distribution of profits resulting from the sale of Maxwell cars. Here the new arrangement will favor the individual dealer, giving the hustler the hustler's reward. If you are a hustler we want you and you will want us So let's get together as soon as possible. Write to me now, telling me something of your territory and its sales possibilities, and I will communicate with you and tell you of the new Maxwell selling plan, the plan for business-getters.

Benj. Briscoe

President.

MAXWELL-BRISCOE MOTOR CO.

Members A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

AJAX WRAPPED TREAD TIRES

Thanks to AJAX quality, it doesn't cost us one per cent. to back up the guarantee that goes with every AJAX tire—5,000 miles of road service.

Do you know any cheaper or more effective advertising argument than that? Or any better recommendation for a tire? Puts the burden of proof on us— relieves you of all risk when you buy AJAX tires.

Write for copy of Guarantee, stating what size tire you are using. Address Dept. A.

AJAX-GRIEB RUBBER COMPANY

GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.

Factories: Trenton, N. J.

BRANCHES:

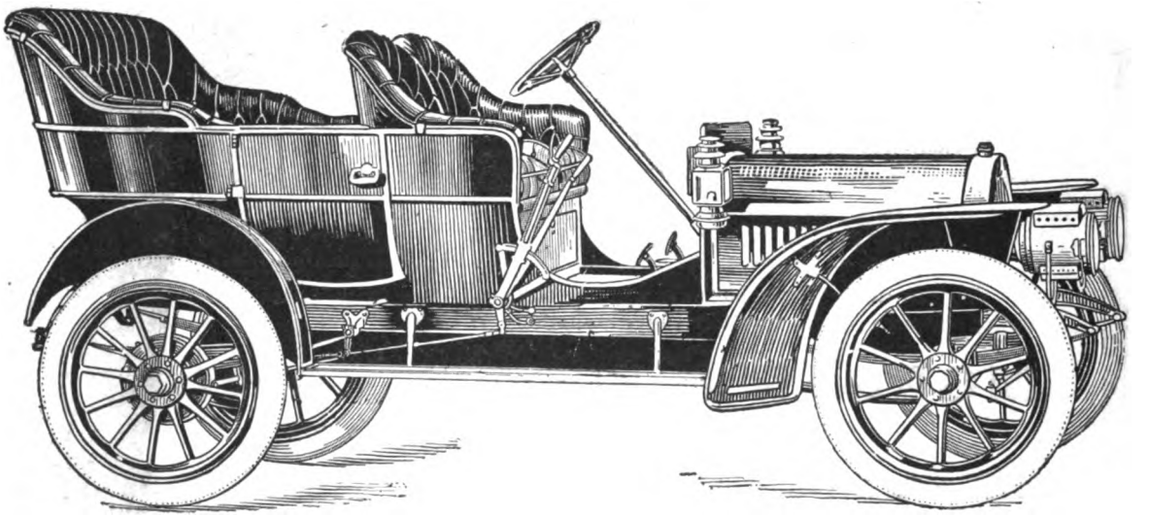
New York, 1776 Broadway
Boston, 819-a Boylston St.
Chicago, 1418 Michigan Ave.
Detroit, 743 Woodward Ave.
Denver, 1529 Cleveland Place
Seattle, 1102 Broadway
San Francisco, 460 Golden Gate Ave.
Los Angeles, 1040 S. Main St.

Agents in all large cities.

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What happened upon the announcement of the new

$1400 Cadillac "Thirty"



When on May 31st we announced that work had actually commenced on the manufacture of parts for 10,000 high grade 30 horsepower four-cylinder cars of Cadillac quality, to be sold at $1,400.00, it was naturally supposed that a certain amount of interest would be created. But honestly we did not expect it to "turn the automobile world upside down" so to speak. It seems, however, that it did, and after analyzing the situation we see that really it is no wonder that a cyclone of enthusiasm swept over not only America, but practically all over the civilized world, amongst dealers, users and prospective users.

Truly the Cadillac "Thirty" was what the world had been waiting for. No one realized this and "took the tip" more than the dealers themselves.

Let's see what happened:

The announcement was made to the public on Sunday, May 31st. On Monday we were almost flooded with telegrams from automobile dealers, of which the following are fair samples:

"Don't close agency for this territory until we see you. Will be in Detroit to-morrow."

"If will give us Cadillac agency will guarantee sale 200 cars. Ample deposit."

"Are you willing to renew contract for next year on basis double business."

"What deposit will you require on hundred new Cadillacs?"

"Will agree handle Cadillacs exclusively and deposit on hundred fifty cars."

On Tuesday the postman was overburdened and by the end of the week we were deluged. In addition to the immense number of inquiries from prospective buyers we received more than 300 letters from Automobile dealers offering to place orders for from 10 to 300 cars each with deposits. Our Sales Department was simply swamped. They could not even read all the letters, much less take up each individual case and handle it properly, so they had to resort to sending out form letters telling the applicants that their propositions would be considered as promptly as conditions would permit.

And the new "Thirty" will not be the only good thing. There will be others, including all the old standbys.

1909 will truly be a CADILLAC year

CADILLAC MOTOR CAR COMPANY, (*Members A. L. A. M.*) **Detroit, Michigan**

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It has been worth several hundred dollars to a good many motorists to learn by experienoe that

MORGAN & WRIGHT TIRES ARE GOOD TIRES

"Experimenting around" in the buying of tires might be a good policy if it was less expensive, but users of MORGAN & WRIGHT tires are thru with it.

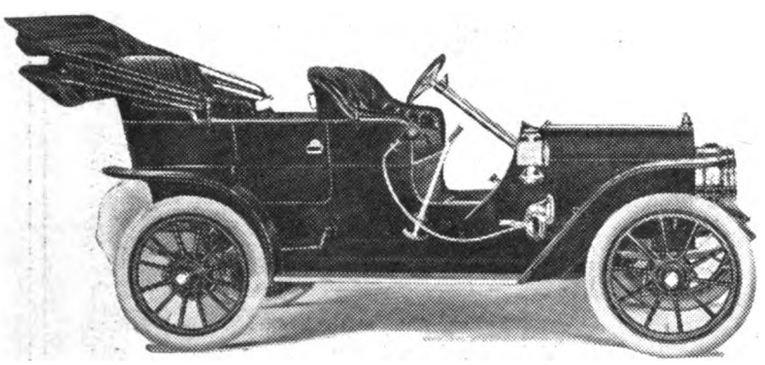
Mr. H. Sherer, of Detroit, who has "been thru the mill," says: "I have owned automobiles since 1902, and have had a great deal of practical experience with tires. In 1906 I shifted to foreign tires. I find, however, that MORGAN & WRIGHT tires give me the best results of all, and I have decided to use them exclusively."

You can rarely find a motorist who has experimented with other brands after trying our tires. Does that fact suggest anything to you?

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere

OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

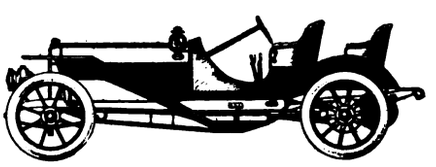
PALMER-SINGER

No. 18 **Palmer-Singer Six-Fifty, Racing Car 6 Cylinder, 60 H. P. $2,450**

Palmer-Singer Four-Thirty Skimabout 4 Cylinder, 28-30 H. P. $1,950

All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Passenger Touring Car 40 H. P. $4,000



Palmer-Singer Town and Country Car 28-30 H. P. $3,000

Palmer-Singer Six-Sixty, $2,850

The Sixty-Six is a touring runabout capable of record-breaking speed and still of carrying three or more passengers with perfect comfort on long and hard runs. It will far outdistance and outwear any car of its class at even $2,000 more in price.

Metropolitan Distributors the SELDEN

Palmer & Singer Mfg. Co.

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He'll get you sure!

YOU CAN'T ESCAPE!

There's only one way out of it—you cannot "protect" against the puncture devil, even by overloading your wheels with heavy armor which destroy the resiliency of your tires.

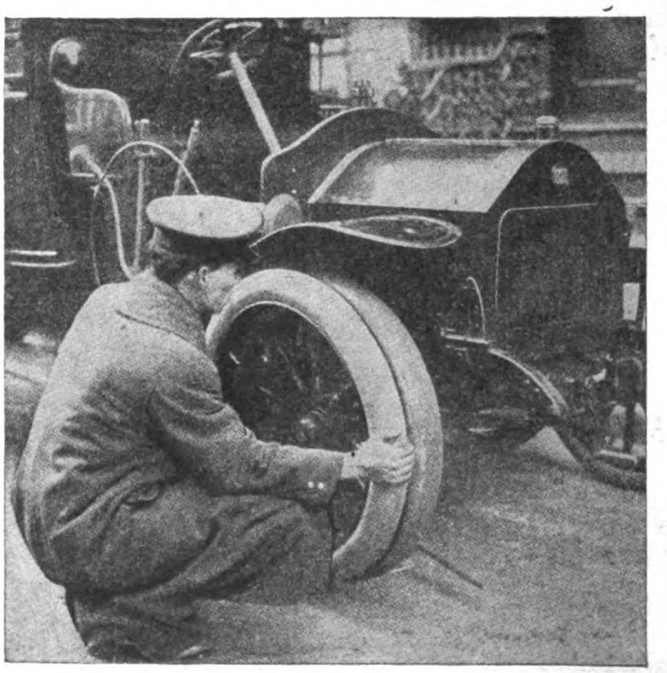
Why not meet your puncture face to face and when he stabs your tire, laugh him to scorn—produce your

STEPNEY SPARE WHEEL

and be on your way in less than a minute.

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When you finish your journey remove the Stepney and repair the puncture.



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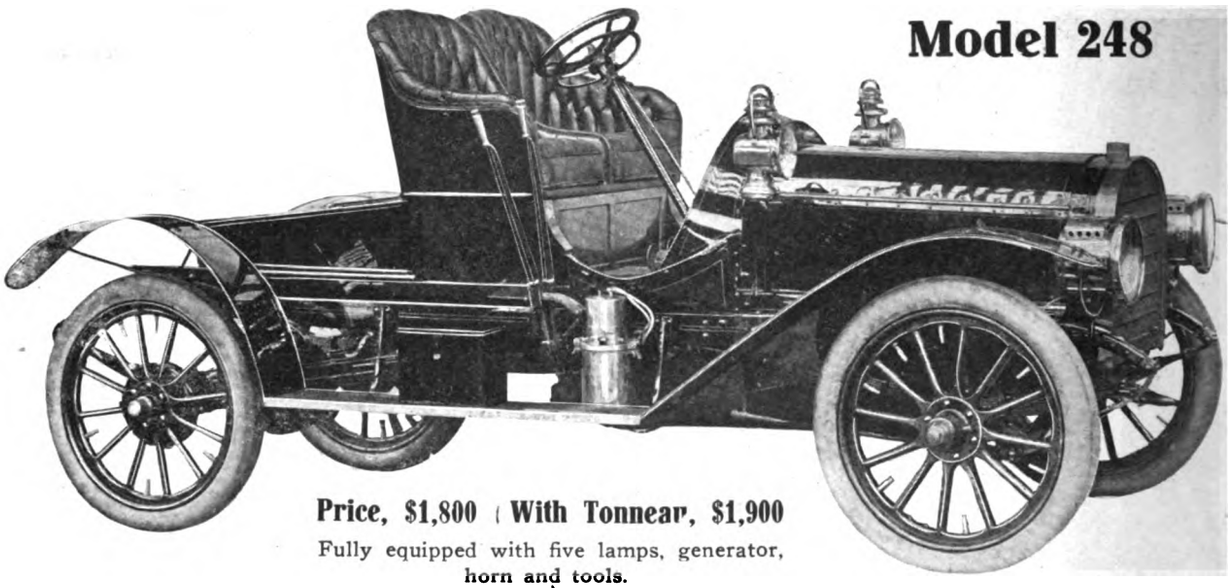
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Fully equipped with five lamps, generator, horn and tools.

Here is an Unusual Car!

FOUR cylinders; full 30 horsepower; adjustable roller bearing transmission; transmission gears made of special steel that will neither mar nor chip; floating type rear axle; full elliptic rear springs.

With tonneau, a complete touring car; full size; five passenger capacity; 108-inch wheel base; 34-inch wheels and 4-inch tires.

Quiet, powerful, flexible and handsome.

Tested by three seasons' continuous service and perfected by the knowledge gained from twelve thousand Ramblers in daily use.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, June 18, 1908. No. 12

WHEAT BELT PROSPEROUS REGION

Reuschaw's Visit Causes Inspiring Reports of Demand for Cars—Fine Garages Built in Small Towns.

R. C. Reuschaw, sales manager of the Reo Motor Car Co., who came to New York last week, after a business trip through the wheat belt, Kansas, Nebraska, Oklahoma, and the Dakotas, brought with him glowing reports of the prosperity prevailing in that part of the country and of the keen demand for automobiles that has resulted.

The immense wheat crop, Rauschaw states, has lined the farmers' purses, and it is not an uncommon sight to see them drive into town, where they dive into their pockets and bring out a roll of greenbacks big enough to choke an ox, from which they peel off the price of a motor car almost as if it was an every day occurrence. To say nothing of others, Reuschaw himself brought back orders for five carloads of Reos which are to be shipped by express. The number and character of garages that are being erected is also impressive. In many places of 2.000 or 3.000 inhabitants the Reo man found fine modern, fireproof structures that would do credit to cities of even 100,000 people.

Fred C. Robie, of the Excelsior Supply Co., Chicago, who is in New York this week, confirms all that Reuschaw says. His company covers the West with a big force of men and does the bulk of the accessory business. The demand for supplies, he states, leaves no room for complaint and outside of the bigger cities, it has not been unsettled by price cutting.

Shanks Leaves Winton for Retailing.

Charles B. Shanks, for nine years identified with the Winton Motor Carriage Co., Cleveland, most of the time as sales manager, has resigned that office to engage in the retail business. He will open a store in Cleveland where, under his own name, he will handle the Thomas-Detroit exclusively. Charles W. Churchill, manager of the Winton branch in New York, will succeed to the position left vacant by Shanks and Charles W. Mears, who, under Shanks's direction, has handled the Winton advertising, now will have full charge of that department.

Ex-Mayor to Sell Spare Wheels.

Sherburn Becker, former mayor of Milwaukee, is going into the spare wheel business. He has secured the Stepney representation for the State of Wisconsin. T. D. Grimke-Drayton, chairman of the Spare Wheel company's board of directors, is now in this country and is reported as being well satisfied with the progress that the Stepney wheel has made here.

M. & W. Branch Moves to Los Angeles.

Morgan & Wright have transferred their Pacific Coast branch from San Francisco to Los Angeles. Their representation in the former city has been turned over to a new firm, Weinstock, Nichols & Co., which was formed for the purpose of acquiring the agency.

Pope to Sell Columbia Steel Mills.

It is probable that the Columbia Steel Mills, Elyria, Ohio, which is one of the Pope Mfg. Co.'s properties, shortly will be disposed of by the receivers. They have been offered $190,000 for it and negotiations for its sale at that price practically have been concluded.

New Factory Probable at Dayton.

Henry Arnstein, of Dayton, Ohio, who has built several cars styled the Big Four Flyer, is preparing to engage in the business on a large scale. The organization of a stock company and the construction of a factory in Dayton are included in his plans.

New Thomas Six at Popular Price.

The E. R. Thomas Motor Co., Buffalo, has under way a six-cylinder car which will list at $2,500—a price which will compel a lot of notice to be taken.

POPE AFFAIRS ARE AIRED AGAIN

Creditors and Receivers Exchange Opinions in Chancery Court—Creditors' Chairman Assumes a New Role.

Reports that friction had arisen between the receivers of the Pope Mfg. Co. and the creditors' committee made it appear probable that the hearing of the receivers' petition to the Chancery Court of New Jersey for authority to continue the business would throw a strong light on the situation. The petition was heard yesterday by Vice Chancellor Howell in Newark and though it was plain that the creditors' committee wants its money in a hurry and in a large lump, the situation was not illuminated to anything like the anticipated extent.

According to the reports that were current, the chairman of the creditors' committee, who represents the note-brokers' interests, had "touched" the receivers for about $40,000 for "services rendered" which suggestion promptly had been repudiated, as also was a second proposal of the same nature which, however, reduced the amount by several thousand dollars. However this may be, it is certain that Chairman Swartwout's firm has addressed a communication to the banks involved proposing that the firm be allowed a 3 per cent. commission on all collections that may be made. This letter is said to have been issued without the knowledge or consent of the other banking representative and that as a result, some extremely emphatic opinions were exchanged between the two men.

The fact is that the Pope receivers have about $1,250,000 in cash in the various States and that the creditors' committee is not content with the 25 per cent. dividend which has been declared and the 25 per cent. additional which is in prospect. Like Oliver Twist, they want more and without waiting for it. The receivers, while admitting that the funds in hand are sufficient for a larger dividend, contend that if it is

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paid, it will cripple their resources and leave them without sufficient working capital to properly conduct and continue the business.

At the hearing yesterday, Receivers Pope and Yule were present, accompanied by the receivers' New Jersey counsel, Sherrard Depue, of Lindabury, Depue & Foulks, of Newark, and Mr. Yule's personal counsel, Scott McLanchan, and by L. H. Freedman, of Joline, Larkin & Rathbone, of New York. Of the creditors' committee there were present, R. H. Swartwout, chairman, and C. N. Gillett, secretary. The committee was represented by Counsellor Percy S. Bryant, of Hartford, while Walter S. Schutz, also of Hartford, represented a number of small creditors. Messrs. Swartwout, Bryant and Schutz all voiced the same opinion, which was tersely expressed by Swartwout when he said:

"We want our money. If the stockholders want to continue the business, let them furnish the funds. The creditors get only the face value of their claims with interest; the stockholders get the rest."

"How much will it require to continue this business for a year?" asked the court.

"About $800,000," responded Receiver Pope.

Receiver Yule said they might be able to get along with $600,000, but should have $800,000, as manufacturing conditions have altered in the last two years.

Mr. Pope stated that the receivers will this week ship the last of the 1908 output of automobiles and for two months had been refusing orders and returning deposits. If permitted to continue the business and to make up 700 cars for next year, he said that all would be sold and deposits secured within three weeks.

Mr. Bryant disclaimed any intention on the part of the creditors' committee to criticize the receivers. He said they had done admirably and given full satisfaction to the creditors, but that they had not shown that they were manufacturing at a profit.

Receiver Yule responded that the report of the certified accountant would show that the business could be continued profitably.

The court inquired whether the creditors' counsel had asked to see this report, and if so, had they been refused. Mr. Bryant answered in the negative.

Vice Chancellor Howell then ordered that one copy of this report be given to the court and another copy to Mr. Bryant, also assuring Mr. Pope that it would not be printed. Pope had said its publication would give to business rivals valuable information regarding Pope manufacturing methods.

"It looks to me from the statements before me that you ought to be able to pay 75 per cent. in four months and have money enough to keep the business from going to the dogs," was one of the concluding remarks of the court. Chairman Swartwout, of the creditors' committee, rejoined:

"If we get 75 per cent. in four months it will be entirely satisfactory."

The Week's Incorporations.

Buffalo, N. Y.—Kane Motor Supply Co., capital increased from $30,000 to $50,000.

Rochester, N. Y.—United States Automobile Co.; capital increased from $200,000 to $300,000.

Somerville, Mass.—Somerville Automobile Co., The; capital increased from $5,000 to $15,000.

Providence, R. I.—Page Motor Co., under Rhode Island laws, with $50,000 capital. Corporators—Arthur A. Page, Samuel J. Greene, O. Fletcher Best.

New York City, N. Y.—Courtney Rubber Co., The, under New York laws, with $100,000 capital. Corporators—W. J. Courtney, J. G. Phell, T. M. Johnson, New York City, N. Y.

Albany, N. Y.—De Freest Automobile Co., The, under New York laws, with $5,000 capital; to conduct garage. Corporators—Matthew De Freest, John Morrissey, John Cleary, Albany, N. Y.

New York City, N. Y.—Automobile Reconstruction Co. of New York City, under New York laws, with $5,000 capital. Corporators—E. J. Forham, H. H. Brown, F. W. Mills, New York City, N. Y.

Pittsburg, Pa.—Iverson Mfg. Co., under Pennsylvania laws, with $100,000 capital; manufacturing automobiles and automobile parts. Corporators—L. Iverson, J. C. Conley, W. D. Rowan, Pittsburg, Pa.

New York City, N. Y.—Motor Taximeter Cab Co., under New York laws, with $150,000 capital; to manufacture, operate and rent vehicles. Corporators—H. C. Kibbe, H. F. Sewall, J. P. Murray, New York City, N. Y.

New York City, N. Y.—Stromberg Motor Devices Co., of New York, under New York laws, with $2,000 capital. Corporators—Seward Davis, Upper Montclair, N. J.; Oliver Williams, Samuel Hodas, Brooklyn, N. Y.

Durham, N. C.—Bull City Transit Co., under North Carolina laws, with $25,000 capital; to operate automobile lines from Durham to Chapel Hill and other points. Corporators—J. T. Fowler, Zet Fowler, Ralph Smith.

Camden, N. J.—Motor Commercial Delivery Co., under New Jersey laws, with $200,000; to manufacture automobiles, engines, etc., and general transfer and delivery business. Corporators—F. R. Hansell, W. F. Eidell, J. A. MacPeak, Camden.

New York City, N. Y.—United Motors Co., under New York laws, with $100,000 capital; to manufacture motors, engines, machines, cars, carriages, wagons, boats, flying machines, etc. Corporators—H. T. Tobey, C. R. Hathaway, C. W. Cuthell, New York City, N. Y.

Brooklyn, N. Y.—Motor Safety Mfg. Co. of the City of New York, under New York laws, with $100,000 capital; to manufacture motor appliances for automobiles, motor boats, etc. Corporators—J. T. Barber, J. P. Carlson, G. Fey, Brooklyn, N. Y.

Joplin, Mo.—Century Automobile Co., under Missouri laws, with $10,000 capital; to manufacture, repair and sell automobiles and automobile appliances. Corporators—Edward P. Rhodes, Frank M. Say, Frank A. Holden, Willard L. Butts, Charles W. Bartlett, H. G. Packer.

New York City, N. Y.—Universal Taxameter Co., under New York laws, with $75,000 capital. Corporators—Harry M. Spence, 2159 Eighty-third street, Bensonhurst, N. Y.; Edward T. Moriarty, 39 West 130th street, New York City, N. Y.; Albert W. Bonynge, 1022 Hudson street, Hoboken, N. J.

In the Retail World.

Browning Bros. have purchased the Ogden (Utah) Automobile Co. The business will be removed about July 1st to the new garage on Grant avenue, which now is being erected for the Brownings.

The Fred A. Bennett Auto Co., which handles the Reo cars in Spokane, Wash., is building a new garage on Second avenue, in the "automobile section." Its completion is looked for about the first of July.

Ralph Hain and George M. Hurley, of Los Angeles, Cal., have formed the Hain-Hurley Auto Specialty Co., and "opened up" at 1205 South Main street. They will manufacture a timing device and other specialties and conduct a general repairing business.

The Penn Automobile Supply Co., of Philadelphia, has removed from its old quarters in the basement at 201 North Broad street, to a remodeled building at 236 in the same street. The entire building will be devoted to the company's business.

Dunn & Gore is the style of a new firm which has taken over the accessory and supply business of the A. S. Thompson Co., at 512 South Broadway, Los Angeles, Cal. The firm is composed of W. D. Dunn and G. R. Gore, the former of whom previously was connected with the Thompson company.

O. A. Clark, president, and C. C. Henry, have disposed of their interests in the Pope Auto Co., Newark, N. J., and the Summit (N. J.) Auto Co., to B. C. Fincke, who becomes president, and C. A. Dickson, secretary-treasurer. The Summit establishment is conducted as a branch of the Newark concern.

Henry Goes to Everitt-Metzger-Flanders.

David C. Henry, formerly of the Electric Vehicle Co. and latterly with the Columbus Buggy Co., has engaged with the new Everitt-Metzger-Flanders Co., Detroit, and will cover territory in their interests.

Morley Diamond Manager at Detroit.

Bert Morley has been appointed manager of the Diamond Rubber Co.'s branch in Detroit.

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POPE AFFAIRS SHOW PROGRESS

Receivers Report Large Volume of Sales for Month of May—Substantial Addition to the Cash Assets.

The report of the receivers of the Pope Mfg. Co., covering their transactions during the month of May discloses an increase of the substantial progress that has characterized the receivership. The figures, as filed in the Connecticut Superior Court, are as follows:

Receipts from collection of accounts and notes receivable of Pope Mfg. Co.:		
Hartford accounts	$1,331.23	
Westfield accounts	230.18	
Hagerstown accounts	88.70	
		$1,670.11
Receipts from sales by receivers.		315,585.99
Receipts from deposits by customers on orders for automobiles		4,196.57
Interest received:		
On accounts and notes receivable		.90
Received from rental of Thompsonville factory		100.00
Refund of travelers and special advances		382.70
Returned Ins. premiums		11.87
Receipts from and for account of receivers in:		
Westfield factory	$32.55	
Hagerstown factory	4,653.22	
New Jersey	128.77	
Illinois	89.95	
Of Pope Motor Car Toledo, O.	1,010.66	
Of Pope receivers, Indianapolis	92.33	
		$6,007.50
		$327,955.64
Cash disbursed for May, 1908:		
Refund of deposits received on miscellaneous undelivered orders		$1,106.40
Receivers' expenses and payments for purchases:		
Pay rolls	$52,225.63	
Miscellaneous and selling expenses	2,129.08	
Materials and supplies.	94,464.43	
		$148,819.14
Special advance for expenses		600.00
Receivers' fees:		
Albert L. Pope	$2,290.32	
George A. Yule	3,500.00	
		$5,790.32
Payments in settlement of accounts with:		
Receivers in Mass.	$2,342.95	
Receivers in Maryland.	3,621.65	
Receivers in New Jersey	174.42	
Receivers in Toledo	316.48	
Receivers in Ind'napolis	67.30	
Federal Mfg. Co.	1,925.00	
		$8,447.80
		$164,763.66
Bal. Amer. Nat Bk.	$223,099.16	
Bal. Phoenix Nat Bk.	197,080.16	
Bal. First Nat Bk.	266.19	
Cash in office	1,816.13	
		$422,261.64
Accrued liabilities of receivers:		
For materials, supplies and miscellaneous expenses		66,168.39
For pay rolls, factory and office.		8,594.22
		$74,762.61
Balance due receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts		397.19
Accounts receivable from sales by receivers, April 30, 1908, per last report		163,624.38
Sales by receivers for May, 1908.		361,615.30
		$525,239.68
Less cash collections for May, 1908.	$315,585.99	
Deposits credited to accounts receivable, cash discounts and miscellaneous contra accounts	27,656.54	
		$343,242.63
Balance May 11, 1908.		$181,997.15
Balance due from receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts for transfer of merchandise and supplies and advances for expenses		$7,430.05

Increased Demand for Accessories.

The prediction, made by W. B. Miller, secretary of the Diamond Rubber Co., in a rather widely published interview last December, that even though the automobile business in general for 1908 might be much smaller than in 1907, the accessory manufacturers would have an active year, has been more than confirmed. As a matter of fact, the Diamond people say that the prediction did not go far enough, so far as their own business is concerned. Since March, the Diamond factories have been working to their fullest capacity, and the daily tire production was never so large as it has been during the past three months. This applies not only to the manufacture of tire casings, but inner tubes as well. A notable feature of the demand for tires tire casings, but inner tubes as well. The increased demand for quick acting rims, also, has thus far prevented the Diamond company from moving the factory in which the Marsh rim is made, from Columbus, Ohio, to the general factories at Akron, as will ultimately be done.

Prizes for Expertness in Tire Replacement.

Anyone who fancies that he is "quick on the trigger" needs but to present himself at the Continental Caoutchouc Co.'s headquarters, Broadway and Fifty-eighth street, New York City, on Friday, 26th inst, to prove or disprove his belief. On that date, the Continental people will give prizes of $15, $10 and $5 in gold, to the persons who replace a Ready-Flated tire with others of the same kind in the shortest time, and next shortest time, respectively. While the competition is intended for chauffeurs, anyone else will be permitted to compete. Three trials will be allowed, and the time be taken on watches that register fifths of seconds.

The Auto Taxicab Co., recently incorporated with a capital of $30,000, to operate in Chicago, has leased the first floor of 2441-2443 Michigan avenue for five years.

ADDING TO E. V. CASH BALANCE

Receivers' Report for May Shows an Increase of $20,000—Sales Account Amounts to Over $66,000.

Halsey M. Barrett and Henry W. Nuckols, receivers of the Electric Vehicle Co., Hartford, have filed in the Connecticut Superior Court a report of their transactions during the month of May. The statement shows:

Sales.

Charges on account and cash sales	$66,115.82

Purchases.

On account	$16,855.35
Cash	203.77
	$17,059.12

Cash Statement.

Receipts:

Cash on hand May 1, 1908.	$100,933.39
Cash collected on E. V. Co. account	414.33
Cash collected on receivers' account	55,270.34
	$156,617.96

Disbursements.

Pay roll	$19,154.55
Traveling expenses	50.00
Creditors	16,253.14
Freight and express	103.29
Salesmen's commission	50.00
Petty cash	203.77
A. L. A. M.	25.03
Water tax	178.80
Telephone and telegraph	301.02
Mercantile books	150.00
Legal expense	44,25
	$36,513.85
Cash receipts	$156,617.96
Cash disbursed	36,513.85
Balance on hand June 1, 1908.	$120,104.11

Greuter Leaves the Matheson Company.

Charles R. Greuter, who since 1903 has been the designer for the Matheson Motor Car Co., Wilkes-Barre, Pa., has resigned, giving ill health as the cause. He will spend some time in a New York hispital having his leg, which was injured, treated. Later he expects to join another large automobile company.

New Cadillac "Thirty" Nearly Ready.

The new Cadillac "Thirty," the announcement of which at $1,400, caused something of a furore, is so far advanced that it will be ready for the inspection of all agents who visit Detroit after July 1st. Sales Manager Benson states that deliveries positively will begin in September.

Remy Books Biggest Order for Magnetos.

What is believed to be the largest American order for magnetos ever placed just has been booked by the Remy Electric Co., Anderson, Ind. It was given by the Buick Motor Co. and calls for 10,000 instruments. Motor Co. and its call is for 10,000 instruments.

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WHITE WINS

A Partial Summary of Victories, May, 1907-May, 1908

Perfect Score in Harrisburg Endurance Run

Tieing with three other cars in the contest of May 5th-6th, 1907. For the result of the "run-off," see below.

Fastest Time in Wilkes-Barre Hill-Climb

Defeating 45 high-powered gasolene cars, in the great contest on Decoration Day, 1907.

Fastest Time in Cleveland Hill-Climb

Defeating 40 high-powered gasoline cars.

Fastest Time in California Hill-Climb

Defeating the fastest of its gasoline competitors by nearly two minutes on the 2⅞ mile hill at Witter.

Perfect Scores in Sealed Bonnet Contest

Both White cars entered made perfect scores in this contest conducted by the Automobile Club of America.

Officially Observed Non-stop Run of 1871 Miles

Held under the auspices of the Royal Automobile Club of England and certified by that organization.

Fastest Time of the Season on the Track

One mile in 1:02, ten miles in 12:54, and twenty-five miles in 29:07 at the Santa Rosa Track Meet.

Officially Declared Most Efficient Car

In the South Harting hill-climb, conducted by the Royal Automobile Club, the White won the contest because it developed at the rear wheels a greater percentage of its assigned horsepower than did any other car. The rating assigned to the White was 50 horsepower.

Wins English Dust Trials

Proving officially that it raises less dust than any other car.

Clean Sweep in the Glidden Tour

Three White entries make three perfect scores.

Won Hower Trophy

The single White runabout entered in the Glidden Tour defeated a dozen high-priced gasoline runabouts competing for this prize.

Won California Reliability Contest

In the original contest held September 20th, two Whites tied with two gasoline cars. In the "run-off" held November 15th and 16th, both Whites made perfect scores, while both gasoline cars were penalized.

Won Quaker City Endurance Run

In this contest, held January 1st, 2d and 5th, the White vanquished 27 gasoline cars of 23 leading makes, winning the MacDonald & Campbell trophy.

Fastest Time in San Francisco Hill-Climb

Winning the free-for-all, the $2,500 class and the $3,500 class.

Fastest Time in the New York Carnival Hill-Climb

Making the ascent of Fort George hill in 32⅕ seconds, compared with the best gasoline time of 36 seconds; largest entry list of any hill-climb ever held.

New San Francisco-Los Angeles Record

The White car made the 478-mile mountainous journey in 17 hours and 17 minutes, cutting 56 minutes from the previous figures.

Double Victory in Harrisburg Endurance Run

The single White entry was the only touring car to make a perfect score, winning the principal 1908 trophy, the Board of Trade Cup, and also the 1907 prize in a "run-off" with last year's other perfect-score drivers.

Perfect Score in Detroit Endurance Run

Perfect Score in Baltimore Sealed Mechanism Contest

Two Perfect Scores in Kansas City Reliability Run

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 18, 1908.

Dealers Who are Deceiving Themselves.

If certain prophets are to be believed, there is a rod in pickle for not only the American Automobile Association, but for the misnamed Automobile Club of America and the National Association of Automobile Manufacturers.

The rod has been placed in the brine by "a dozen or more dealers" who, according to the seers, "have assumed the responsibility of racing and paid most of the bills, while the manufacturers have reaped most of the benefit." These men, according to the wiseacres, "declare that they do not intend to sit back, and have the manufacturers or the warring automobile organizations tell them whether they are to eat flesh, fish, or good red herring, but intend to do some of the ordering themselves."

In short, these "dozen or more dealers" mean to "take over the control of racing" if sanctions are withheld, or men are disqualified whom they think should not have been disqualified. It is a prospect sufficient to make any organization tremble. But if the "dozen or more dealers" have any real friends, the latter should take them aside and very earnestly whisper the word "Don't" into their ears.

What is wanted for the lasting good of the sport is not more trade influence, but less of it. The sport has been made so very much like a business that the genuine sportsman never has had a ghost of a chance. If this were not the case, the manufacturers and dealers who complain of the expensiveness of competition, now would have less cause for such complaint. What automobiling as a sport requires, is men who compete for love of the sport and not for the advertising there is in it; and the sooner the truth is realized, the better.

There is no room or justification for a trade controlled sport. There is no surer way of exciting suspicion and of killing it than by placing the government in the hands of men whose inspiring motive is self-interest. Undoubtedly there are not a few men on great newspapers, and others not so great, which receive the favors of "a dozen or more dealers" who will find it profitable to lend hope and cognizance to the latter; but the result is inevitable, though it may not become apparent until, as always is the case, their favors shrunken, the great papers drop the dealers and their cause, like so many squeezed lemons. It were well to remember that not so very many years ago these "great papers" devoted quite as much space to cycling as they now devote to automobile sport.

Electric Vehicles, Real and Unreal.

Electric vehicle mileage is not the vexed question it was at one time. Nevertheless it furnishes considerable food for thought and argument, and if not wisely treated tends to the development of types which are neither practical nor destined to prove a lasting credit to the trade. In short, the storage battery has been in general use for so long a time, and the science of electricity is so thoroughly explored that makers of electric vehicles are placed in a class which is pretty uniformly restricted as to its products, in that stress of competition and general enlightenment have combined to place its members on a pretty nearly even footing. That it is not the custom to build vehicles for very high mileage, or very high speeds, is, therefore, proof that such constructions are not economical in the broadest sense. Generally speaking, the radius of the well-designed electric vehicle is sufficient for the service for which it is intended, while the possibility of changing batteries makes its extension easy where regularly scheduled routes are to be covered. The speed of this class of vehicle too, is all that is properly required for the city traffic, to which it is most properly suited.

This being the case, it follows that in such vehicles as are sometimes produced with certain specific recommendations of one sort or another, those qualities must have been attained at the expense of certain other, unenumerated factors, which are taken into consideration by the majority of makers. The result is that while the vehicle generally will come up to the performance predicted by its makers, it does not always prove as economical to run, or as durable, as others about which no such claim is made.

If the requirement of its owner is that of high speed, or great mileage, relatively speaking, then it may be such a vehicle will fit into his service in an economical way. Otherwise, the chances are that he will find the machine unduly expensive either to run or to maintain and that it will not prove a profitable investment to him.

It is well known that by the use of lightweight, single tube tires, thin plate batteries, and light carriage work, a very different performance in the matter of both mileage and speed may be obtained, from that obtainable with what may be termed the more standard types of vehicle. These methods are expensive, however. Thin battery plates are short lived, and liable to give way at any time under stress of excessive load, suddenly applied. Light tires, while reducing the vehicle resistance on the road and also the battery consumption, are not long lived, nor are they as proof against injury as those which are more commonly used. The evils due to light frame and body construction are equally patent in a vehicle which has seen service.

The point is that buyers of electric vehicles should consider carefully before purchasing, whether their requirements are those which are to be satisfied by the average representative electric, or whether they exceed its capabilities in any way. If they do, such a "special" type may prove advantageous. More likely, however, a vehicle of either the steam of gasolene types would serve to better advantage. The powers of the thoroughly reliable electric are pretty well defined. Progress in its development must be relatively slow, simply because the

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field has been so thoroughly explored. Rational improvements are to be encouraged and are to be expected in no small number and significance. But the buyer without experience in this line, should beware of investing in constructions which are distinctively radical, or which are supported by "world-beating" claims.

The Matter of Tire Inflation.

To the average man who has been accustimed to thinking of pneumatic tires as either "hard" or "soft," and so, as either in suitable or unsuitable condition for use, it is a striking idea that the actual pressure to which any given tire should be inflated must relate largely to the construction of the tire—not in the sense of its resistance to blowouts due to excessive internal pressures, but to the relative durability of the rubber and fabric combination in withstanding the effects of repeated flexure. This, it appears, is the case with tires applied to heavy vehicles more particularly, as the use of very hard tires in such machines, throws a much heavier duty on the springs than it is absolutely essential they should carry. With the lighter vehicle, more resilience may be derived from the springs and less proportionately, from the tires. But even here, the degree of tire-inflation must be proportioned to the structure of the tire walls as well as to their strength.

The question which has been raised as to the effect of inflation pressures on the speed of racing cars, is likely to provide not a little enlightenment in the matter of the general requirements in regard to inflation. S. F. Edge, proved to his own satisfaction on the Brooklands Motordrome, that the speed of the car was but little influenced by variations in tire pressure. Supposing this to be absolutely so in a general way, the comfort of the touring motorist might be speedily increased to no small extent by the use of tires of comparatively low inflation, but capable of withstanding the effects of continued flexure.

Against these conclusions the results obtained on a dynamometer by Mr. Alex. Churchward, given in another column, appear to prove the reverse to be the case. Yet it is to be observed that his results were determined under conditions paralleling those of the perfect road, while the results of corresponding tests made on a highway were it possible to obtain them, might show less gain for the high inflation pressure, owing to its bounding action and the consequent loss of traction involved through slipping of the wheels. Actually, of course, the amount of the traction resistance in proportion to the windage becomes so low at speeds above the normal that inflation pressures probably play but a small part in the total amount of power consumed, so that the variations involved are of comparatively slight moment. At moderate and low speeds, especially with light vehicles, it is of greater consequence. But even here the cost of power is sufficiently low so that the designer can afford to sacrifice something to the comfort of the passengers, if necessary.

The very evident conclusion is that lower inflation pressures than have been thought advisable hitherto may be used without serious loss, in any type of vehicle. The result will be less strain on the springs, less shock to the mechanism of the car and to the occupants, and longer life for both. Such a reduction must be subject to the dictum of the tire makers, however. For with a tire run partially "slack," the bending of the walls is greatly increased, and the strains in the structure are augmented proportionately. There is no doubt that the degree of hardness to which many tires are inflated renders them of no more comfort than a solid tire. Hence any possible advance in this direction must be counted a direct gain to the user.

One of our contemporaries which so regularly follows the lunch route that its contents usually are suggestive of "suds" and seafoam, has discovered that the word "or" in the Ostend rules, will permit six-cylinder cars, as well as four-cylinder ones—which are specifically named—to compete in the outlaw race for foreign cars in Georgia this Fall. It is hoped that the "discovery" will assist in relieving our contemporary from its awkward and painful effort to straddle and afford it an excuse for assuming the position it is so anxious to assume. It properly belongs on the anti-American side of the fence.

"In every sport that is conducted, the box office has something to say about its control."—Opinion credited to one of "a dozen or more automobile dealers."

Bosh! At any time the box office has anything to say about the control of sport, it is time for that sport to curl up and die. "Box office control" is the one sure way of befouling sport. It is the basis of practically all the fraud and fakery that ever is perpetrated.

COMING EVENTS

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 18, 19, Atlanta, Ga.—Fulton County Automobile Club's 382 miles sealed bonnet endurance contest to Macon and return.

June 19, Hartford, Conn.—Automobile Club of Hartford's gymkhana meet at Luna Park for benefit of Hartford Hospital.

June 20, Buffalo, N. Y.—Buffalo Country Club's annual gymkhana games.

June 20, Oakland, Cal.—California Woman's Automobile Club's endurance run to San Jose and return.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Minneapolis, Minn.—Minneapolis Automobile Club's annual hill climb.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Pueblo, Col.—State Fair Association's meet at fair grounds track.

July 4, Glens Falls, N. Y.—25 miles stock car race at mile track.

July 4, Baltimore, Md.—Motor Car Racing Association's meet at Pimlico track.

July 4, Long Branch, N. J.—Elkwood Park Automobile Association's meet at Elkwood Park track.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrimac boulevard.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, St. Paul, Minn.—Automobile Club of St. Paul's meet at Hamline track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

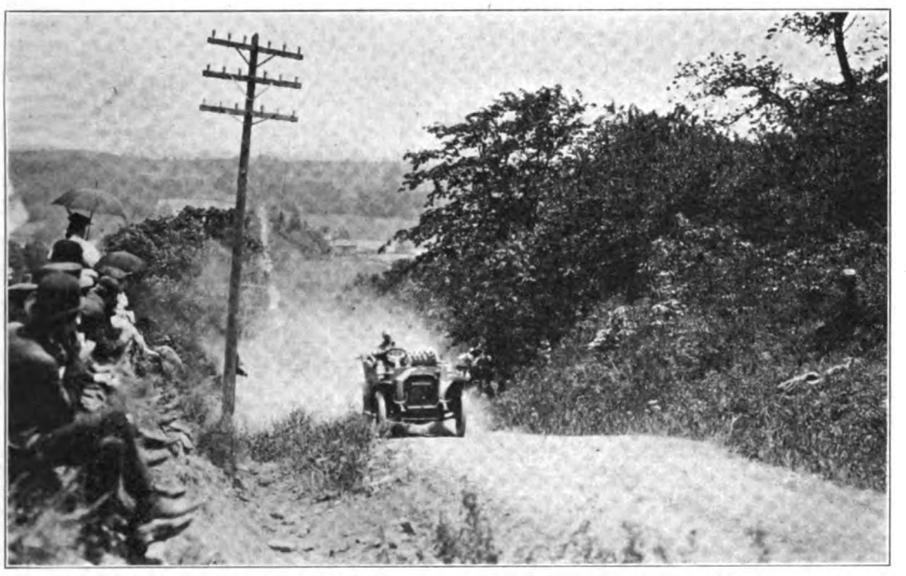
January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

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DIVIDED HONORS ON PORTER HILL

Haupt Fastest in Cleveland Climbfest—Miller Captures Four Events—Woman Wins a "Championship."

If the title means anything, the Cleveland Automobile Club's annual hill climb, held on Porter hill, 23 miles from that city, on Saturday afternoon last, 13th inst., enabled Mrs. K. L. Otis to style herself the amateur champion hill climber of Cuyahoga county. Driving a 40 horsepower roadster, she made the ascent in 54⅕ seconds in the event labeled "championship." She was, of course, the feature of the day, but what would have been said of the club, in the event of accident, for permitting a woman to compete is another story. Mrs. Otis did not make the fastest time of the day, however, as William Haupt, of Philadelphia, who has been performing a great many hill climbing stunts this season, made the best time of the afternoon when he piloted his six cylinder car up the 16.9 per cent. grade in 36 seconds. The real honors of the day went to A. C. Miller, whose Stoddard-Dayton won four of the regular events and ran second to Haupt in the free-for-all.



A. C. MILLER (STODDARD-DAYTON) WINNING ONE OF HIS FOUR VICTORIES

Despite its distance from Cleveland, Porter hill attracted a fairly large gathering. Nearly 150 cars made the trip from the city and reinforced by more than a thousand countrymen from the surrounding district probably 2,000 people saw a long program decided. A new timing device, the invention of Walter C. Baker, of Cleveland, was tried with success. The instrument, which is similar in many details to a time recording clock, has its dial covered with paper, over which a fountain pen-like instrument traces a line, continuous except at the start and finish of a race. At the start the line jogs outward, then onward sharply, the change in course of the line being similar at the finish. A ship's chronimeter is attached to the time recording device which registers the fractions of seconds in tenths.

Porter hill is considerably steeper than any of the former climbing grounds of the Cleveland motorists and there was some doubt as to the ability of some cars to climb it when the place was suggested. How little the critics of the course reckoned with the ability of present day automobiles to negotiate inclines was demonstrated when even the electric cars rolled up without any trouble and really made fast time, compared with the gasolene cars. The course was a little dusty, but in other respects ideal for the purpose. A long rolling road, stretching straight ahead for a clear half mile, made an excellent track for a hill climb.



WILLIAM HAUPT (CHADWICK) MAKING THE FASTEST TIME

While Haupt's work was nothing short of sensational, as he drove with a daring that caught the fancy of the crowd, Albert Miller received as much aplause, when he won four of the regular events and pushed Haupt hard in the free-for-all. The latter's time in the free-for-all was 42.9 seconds, and the record was made in a special trial a short while afterward. For general all-around efficiency as brought out in the piston displacement handicap the technical committee found that W. A. Bourke's Knox had carried off the honors; its time was 51.8 seconds. The summary:

Stock cars, $850 and under—Won by L. E. Manley, Ford. Time, 128.3.

Stock runabouts, $850 to $1,250—Won by C. P. Brockway, Overland. Time, 1:17.3.

Stock touring cars, $850 to $1,250—Won by C. D. Paxon, Jackson. Time, 1:52.2.

Stock runabouts and roadsters, $1,250 to $2,000—Won by C. D. Paxon, Jackson. Time, 0:55.4.

Stock runabouts and roadsters, $2,001 to $3,000—Won by A. C. Miller, Stoddard-Dayton, 0:54:4; second, W. A. Bourke, Knox, 0:55.7; third, C. D. Paxon, Jackson, 0:56.4; fourth, A. C. Miller, Stoddard-Dayton, 0:59.2.

Stock touring cars, $1,001 to $3,000—Won by A. C. Miller, Stoddard-Dayton, 1:03.6; second, Andrew Aubel, Oldsmobile, 1:52.2.

Amateur championship Cuyahoga county—Won by Mrs. K. R. Otis, Stearns, 0:54.6; second, F. W. Work, Oldsmobile, 0:54.7.

Electrics, $2,000 and under—Won by W. F. Plistine, Columbus, 1:15; second, E. Gruenfeldt, Baker, 1:33.9; third, F. S. Peck, Babcock, 1:34.5.

Electrics, $2,000 and over—Won by E. Gruenfeldt, Baker, 1:00.7.

Six cylinder stock cars—Won by William Haupt, Chadwick,, 0:41.

Stock cars weighing 1,432 to 2,204 pounds—Won by A. C. Miller, Stoddard-Dayton,

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0:46.8; second, W. A. Bourke, Knox, 0:51.1; third, C. D. Paxon, Jackson, 0:53.5.

Stock cars weighing over 2,204 pounds—Won by William Haupt, Chadwick, 0:41.2.

Piston displacement handicap—Won by W. A. Bourke, Knox; W. W. Partridge, Great Arrow; third, A. C. Miller, Stoddard-Dayton.

Free-for-all—Won by William Haupt, Chadwick, 0:42.9; second, A. C. Miller, Stoddard-Dayton, 0:45.7; third, C. D. Paxon, Jackson, 0:50.6; fourth, J. M. Watson, Corbin, 0:50.8; fifth, W. A. Bourke, Knox, 0:52.7.

Time trials for record—By William Haupt, Chadwick. Time, 0:36 (record for hill).

Columbus to Have a "Trouble Race."

Such sport as never has been seen before in Columbus, O., is promised in the automobile races to be run at the festival of the Eagles in the Driving Park there on June 19th. They will be in charge of the Columbus Automobile Club, and the principal event will be a 100 miles race for stripped catalog stock cars, open to local owners or drivers. A city championship is another of the events; but the one that probably will create most enjoyment will be what is termed a "trouble race" of 1¼ miles for five-passenger touring cars, each to carry observer, driver and three passengers. The cars will be started at the three-quarter pole, with a box of sand attached to each, run to the wire, detach the box, run to the first-quarter pole, change the inner tube or tire complete on the rear wheel, run to the second-quarter pole, stop the engine, passengers and driver dismount, run to the third-quarter pole, light all five lamps and finish with all lights burning. Demountable rims and electric lights will be barred and the tires must be inflated with a hand pump.

Cash Prizes for St. Paul Meet.

Several noted drivers and cars are expected to take part in the St. Paul Automobile Club's meet at the Hamline track, St. Paul, on Wednesday, July 15th. In addition to the trophies for each of the six events there is to be a cash prize for each race with the exception of the club championship. The program is: Five miles, stock chasses of 60 horsepower and under; prizes, a silver cup and $100. One mile, flying start; one mile track record, silver cup and $200. Twin City championship, five miles, for fully equipped stock cars, Minneapolis and St. Paul club to each nominate one car; the Twin City championship cup to go to winning club and gold watch fob to winning driver. Five mile match for professional drivers and racing cars, flying start, best two out of three five-mile heats, with not more than two cars in a heat; silver cup and $150 to winner. Ten miles handicap, silver cup and $100. Twenty-five miles, stock chasses of 60 horsepower and under; silver cup and $150 to winner, and silver cup for second place.

SIMONS WINS KANSAS CITY PRIZE

Decision on the Run-Off Reached by Review of Records—Particulars of the Several Scores.

It has now been decided that Carl J. Simons, Oldsmobile, won the run-off of the tie in the Kansas City Automobile Club's endurance which was held on June 9th. The original run was held on May 16th, but as 17 cars finished with perfect scores it was decided to make the perfect scorers run the contest over again to decide the winners of three cups. As stated in last week's Motor World, the tie was run on Saturday, 9th inst., but it was not until several days later that the scores were announced. After a careful review of the cards the committee has announced that Simons wins with a score of 840 points out of a possible 1,000. F. F. D. Morairity, Stevens-Duryea, was second with 795; W. S. Hathaway, Maxwell, third with 770, and H. Holzhauer, Pope-Hartford, fourth with 696. The scores of the other four cars to finish are low, a brief summary of the particulars upon which the relative standing of the cars was based being as follows:

H. E. Rooklidge, White—Vaporizer replaced, boiler feed stopped up, seals broken, damaged wheel and fender, time, engine stopped; penalty, 795 points; score, 205.

F. D. Moriarty, Stevens-Duryea—Broken radiator seal, both rear fenders broken, one rear spring flat, time; penalty, 205; score, 795.

Carl J. Simons, Oldsmobile—Broken radiator seal, rear axle sprung, behind schedule; penalty, 160; score, 840.

Roy Sanborn, Stanley—Fusible plug blown out, stop for gasolene, behind schedule; penalty, over 1,000.

H. Holzhauer, Pope-Hartford—Bonnet seal broken, damaged fender, behind schedule; penalty, 304; score, 696.

W. S. Hathaway, Maxwell—Bent steering knuckle replaced, radiator seal broken, front axle sprung, behind schedule; penalty, 230; score, 770.

M. C. Nolan, Stevens-Duryea—Ignition adjustments, all seals broken, motor dead 52 miutes, fan belt repaired, one rear spring flat, front fender loose, behind schedule; penalty, 825; score, 175.

W. M. Goodrich, Studebaker—Missing motor, pump attached to force gas to carburetter, loose spokes in rear wheel, replaced spark plugs, broken radiator seal, behind schedule; penalty, 988; score, 12.

Colorado Schedules a Strenuous Run.

As the earth's surface in Colorado is not quite as level and smooth as is to be found in some other places the 500 miles sealed bonnet reliability run to be held in northern Colorado July 2, 3 and 4, is likely to prove the most strenuous contest of the sort ever held. The first day's run from Denver to Fort Morgan and return is over picturesque but rocky and uncertain roads, and it is expected that many cars will fall by the wayside on that portion of the run. The route on the second day is from Denver to Fort Collins, Greeley, Boulder, returning to Denver, while the final day will take the contestants to Colorado Springs and return. All adjustable parts will be sealed, and no adjustments or replacements, however trifling, will be permitted. Different schedules will be arranged for the different powered cars and being late or early at any of the controls will result in a debit of three points for every minute. The rules have been made so exacting that the promoters do not expect that any cars will finish with perfect scores, but they aver that it will prove the most exhaustive test of motor cars ever witnessed by the people of that section.

Savannah Secedes to Get a Race.

The Savannah (Ga.) Automobile Club, which wants a road race so badly and doesn't care how it gets it, has completed its pitiable somersault by resigning from the American Automobile Association in order to assist the disgruntled Automobile Club of America in conducting a road race for foreign cars on American soil. The A. C. A. had one other spasm of delight late last week, apparently due to a "hoax." According to its press bureau, it received a telegram asking for an entry blank and stating that an Acme 6-cylinder car would be entered for its Hessian race, the inference being that the message came from the Acme Motor Car Co., who, unfortunately promptly repudiated it. Whether it was the Savannah club's action or the alleged telegram that caused it, it is certain that "Bobby" Morrell, the A. C. A. chief bandage-wearer, "Baron" Schwarzkoff, who carried Europe on his shoulders for several years and who recently distributed broadcast postal portraits of himself—he has won 7 fourth prizes at beauty shows—and several other unusual Americans, joined in a dinner of mutual admiration at Hotel Astor.

Endurance Run to Precede a Carnival.

An "invitation endurance run" from Philadelphia to Wildwood, N. J., will raise the curtain to the Fourth of July meet of the Motor Club of Wildwood. The endurance run will take place on July 3d and that night there will be an illuminated automobile show on the boardwalk. A decorated parade will be the feature of the next morning and in the afternoon the straightaway races will be held on the Central avenue boulevard. Nine events at one mile have been programmed, as follows: Gasolene cars selling under $1,250; gasolene cars selling from $1,251 to $2,000; gasolene cars from $2,001 to $3,000; gasolene cars from $3,001 to $4,000; four cylinder cars selling above $4.000; six cylinder stock cars; free-for-all; steam stock cars only, and time trials.

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KEPT 6000 SPECTATORS GUESSING

Half Century Event at Point Breeze Won by Frease—Other Spirited Features of a Successful Meet.

With perfect weather, good management, the presence of 6,000 enthusiastic spectators, and spirited racing, the Quaker City Motor Club's meet at the Point Breeze track, Philadelphia, Saturday afternoon last, 13th inst., was a big success in spite of the supposedly unlucky day of the month. By reason of its large number of starters —fourteen—the 50 miles stock car race was the feature event of the day and the race was so contested that the winner was not apparent until within a few miles of the finish.

It was the last event on the program and the excitement began when the starter gave the pistol to the 14 drivers. The field got away in a bunch and it was nothing short of miraculous that they got around the first two turns without accident. On the back stretch of the first mile Robert Morton, Pullman, jumped into the lead and with the others strung behind him came down the stretch for the first time. Wallace H. Owen, American, was close behind and this order continued for eight miles when tire trouble caused Morton to slow up and Owen took the lead. It did not take Morton long to get a new tire and then he went after Owen, who had been plugging away in front. Owen headed the procession for 25 miles before Morton cut down the lead and passed amid cheers from the grandstand. His lead was short-lived, however, for in the 28th mile he was obliged to leave the track again, and Edwin H. Frease, Autocar, who had been jogging along at a steady pace all the while nosed to the front. After that Frease was never headed but the race was exciting from the fact that the others made a valiant effort to overhaul him, while at the same time, J. F. Brown, in another Autocar, had been hammering at the remainder of the field with such good effect that he finally landed in second position. Perhaps the most consistent race of all was driven by Frank Yerger, Studebaker, who was looked upon as a likely winner until a puncture temporarily put him out of the running in the 46th mile.

The meet was started at half-past one o'clock, with two events for little cars, and the first, at one mile, drew three contenders, a Buick, with Wilkie at the helm; a Maxwell, driven by David, and a Ford, with Graham up. Wilkie captured the cup and also got the next event, at three miles.

The third race brought out the higher-powered cars and Jack Harkin, Thomas-Detroit, looked a sure winner until the fourth mile, when Morton snatched the lead from him; another Pullman, driven by C. B. Kirkham, slid in for second place. Only two cars started in the next race for touring cars and William Fritag's Mitchell beat David's Maxwell. In a special event for Autocars John Archfield ran three miles in four minutes flat, defeating Brown and Frease, in this order, by a narrow margin.

After this Leonard Zengle made his appearance with his Pennsylvania car and had a lot of fun in the fifth race. Zengle, Owen (American), and Van Tine (Garford), were scheduled to go five miles, but after three ineffectual attempts to get a flying start, Owen withdrew and let Zengle and Van Tine fight it out. The former won the event easily.

The last event before the half century was put on was at 10 miles for high-priced cars and it developed into a match between Charles Howard, Thomas Flyer, and Wally Owen, American. The Garford car ran all right for eight miles, but a puncture put a stop to it. Up to that time the race was the best of the meet, as shown by the slight difference in time at the finish. The Thomas won by two-fifths of a second. "Wally" Owen was particularly unfortunate. After getting through the meet without accident he broke his wrist in two places while cranking his car preparatory to starting for home. The engine kicked and the crank did the rest. The summaries:

One mile for stock runabouts, $850 or under—Won by Edward Wilkie, Buick; second, J. F. Graham, Ford; third, William N. Davids, Maxwell. Times, 1:34, 1:37⅗, 1:44⅖.

Three miles for stock cars, $850 to $1,250 —Won by Edward Wilkie, Buick; second, William Fritag, Mitchell. Times, 4:24⅕ and 5:01⅕.

Five miles for stock cars, $2,001 to $3,000 —Won by Robert Morton, Pullman; second, C. B. Kirkham, Pullman; third, Jack Harkin, Thomas-Detroit. Time, 6:17.

Five miles for stock touring cars, $1,251 to $2,000—Won by William Fritag, Mitchell; second, William David, Maxwell. Time, 7:21.

Five miles match—Won by Len Zengle, Pennsylvania; second, A. G. Van Tine, Garford. Time, 6:27.

Ten miles stock cars, $2,001 to $3,000.— Won by Robert Morton, Pullman; second, C. B. Kirkham, Pullman; third, J. F. Brown, Autocar. Time, 12:27⅗.

Ten miles, stock cars, $4,001 or over— Won by Charles Howard, Thomas Flyer; second, Wallace Owen, American. Times, 12:00⅗ and 12:00⅘.

Fifty miles free-for-all stock cars—Won by E. H. Frease, Autocar; second, J. F. Brown, Autocar; third, Frank Yerger, Studebaker; fourth, Wallace Owen, American. Time, 1:06:51.

One mile time trials—Won by Len Zengle, Pennsylvania, 1:10; second, Charles Howard, Thomas Flyer, 1:16; third, A. G. Van Tine, Garford, 1:18.

Three miles special for Autocars—Won by John Archfield; second, Jos. Brown; third, E. H. Frease. Time, 4:00.

FIGHTING THE RHODE ISLAND LAW

Question of Constitutionality Taken to the Supreme Court—Right to Impose Graded Tax the Main Issue.

The right of the State of Rhode Island to impose upon automobile owners an annual tax graded by the horsepower of their machines is the main point at issue in a case now before the Supreme Court of the State, whereby the constitutionality of the recently enacted law is to be tested. This case was made up by the refusal of Jefferson K. Crafford to pay a fee of $15 for the registration of a car which he bought on June 9th, and his consequent failure to secure registration. Then, through Walter H. Barney, a petition for a writ of mandamus was filed with the Supreme Court. Crafford is chauffeur for William Penn Mather, president of the Rhode Island Automobile Club, and his proceedings in this instance are practically the result of action taken at a meeting of the board of governors of the club, on advice of the laws committee to contest the new law on the ground of non-constitutionality.

Crafford's petition for a writ of mandamus requiring the State Board of Public Roads to receive his statement and grant registration for his machine, says in part:

"That the refusal of said board to receive said statement from your petitioner or to register said motor vehicle to assign a distinguishing number or mark or to issue to your petitioner a certificate of registration of said vehicle unless and until a fee of $15 is paid, as by said board demanded, is unlawful for the following reasons, viz.:

"1. There is no law requiring such a payment and a prerequisite to the filing of said statement the register of said vehicle, the assigning of a distinguishing number or mark and to the issuing of a certificate of registration, as requested by your petitioner of said board as aforesaid.

"2. The provision of said section 8 of said chapter 1592, insofar as the same requires the payment of certain fees graded in accordance with certain classifications of motor vehicles by horsepower as therein set forth for the certificates provided for by section 2 of said chapter 1592 of the Public Laws, are unconstitutional and in violation of the provisions of section 2 of article 1 of the Constitution of Rhode Island and Providence Plantations.

"3. That said provisions of said section 8 of said chapter 1592 are unconstitutional and in violation of the provisions of section 16 of article 1 of the Constitution of Rhode Island and Providence Plantations.

"4. That said provisions of said section 8 of said chapter 1592 are unconstitutional and in violation of article 5 of Amendments to the Constitution of the United States of America.

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"5. That said provisions of said section 8 of said chapter 1592 are unconstitutional and in violation of section 1 of article 14 of the amendments to the Constitution of the United States of America.

"Wherefore your petitioner most humbly prays for this Honorable Court to issue a writ of mandamus out of and under its seal, requiring and enjoining the said John F. Richmond, William C. Peckham, Frederick E. Perkins, Robert B. Treat and John H. Edwards, as they are members of and the State Board of Public Roads, to forthwith receive from your petitioner said statement and file the same, and to register said motor vehicle and assign to it a distinguishing number or mark and to issue a certificate of such registration to your petitioner; and that such further order may be made in the premises as justice may require and to your honors may seem meet. And so your petitioner will ever pray."

African Explorer Delayed in a Desert.

Two hundred and ninety days is the present African transcontinental automobile record. It was established on May 26th, when Lieutenant Graetz, of the Prussian army, reached Serenje, Rhodesia, practically completing his journey from Dar-es-Salaam, German East Africa, whence he departed on August 10th last. When last heard from, the lieutenant had just succeeded in crossing an arid desert in order to accomplish which, he had been forced to eke out his supply of cooling water with a ration of cold tea, reserved for his own consumption and that of his party. According to the meager despatch which heralds his arrival at his journey's end, a full month of the period which has elapsed since he was reported, was consumed while the expedition was marooned in the desert owing to a gasolene famine. He was obliged to send a native guide to Serenje for more fuel. The car employed for the trip was of special construction, its most noticeable features being its enormous wheels and tires. The fuel tankage was sufficient to supply the 45 horsepower motor for 600 average miles. The party consisted of the lieutenant, a machinist and a native servant.

Improving Jacob's Ladder and Mowry Hill.

"Jacob's Ladder," and Mowry Hill, the Berkshire twin terrors of automobilists, are soon to be reduced to the quiet dignity of ordinary and unobtrusive hills. Money finally having been raised by automobile clubs or donated by hotel keepers, a contractor has been engaged to alter the famous hills which lie between Springfield and Pittsfield, Mass. Last Friday, the 5th inst., the work began, the roadway is being widened by dynamiting the rocks which are on either side; other rocks are being dug away, and the roadbed will be regraveled and drained, and ditches filled up. It is thought that the work can be done in two weeks, after which the road will be safe for tourists.

BIG QUESTIONS IN LITTLE COURTS

Curious Rulings by a Larchmont Justice—Novel Point of Law Raised in Proceedings at Jamaica.

Despite the fact that there is no speed limit in Larchmont, N. Y., an automobilist has been fined $25 for exceeding it. Just how this remarkable judicial decision was reached, will be determined by a higher court to which an appeal has been taken.

The point was raised when J. R. Johnson, Jr., who had been arrested and charged with exceeding the speed limit, was arraigned before Justice of the Peace O. Ernst, which latter, when not in the judicial ermine dons the spotless white jacket and apron of a suburban dentist, for such he is. At the trial, Johnson's counsel, Mr. Olvany, who is the attorney for the Association of Motor Car Owners—of which association the prisoner is a member—requested a copy of the township ordinance regulating the speed limit of automobiles. The court admitted that there was no such ordinance in existance. All this time the prisoner stood charged with "exceeding the speed limit over a marked course in the village of Larchmont."

The defendant's attorney then moved for his client's discharge and delicately intimated that it would be rather difficult to break a law which did not exist. "Overruled," said the court.

As there was no court stenographer, the defendant furnished one who qualified and was sworn in; then the case proceeded. The evidence showed that a constable timed the automobile in question over a course which he admitted he had not measured, and therefore was not legally qualified to give evidence as to its length.

"I object to constable's testimony," said defendant. "Overruled," said the court.

The court then permitted the constable to be represented by private counsel, against the objection of the defense, who pointed out that such counsel had no legal standing and should not rightfully be permitted to cross examine. Regardless of citation from higher courts and the law in general, every objection was overruled and exception taken by the defense for the purpose of appealing the case, which appeal will be taken immediately.

The fine was $25, which was paid under protest at the time. The Association of Motor Car Owners is going to make this a test case, as it is asserted the practice of justices of the peace in townships and villages of New York State in arresting and finding automobilists without any justification or legal status is becoming a serious menace to the automobile public.

Another case in which the New York motor vehicle law is involved, came up last week in the court of Special Sessions of Jamaica, L. I. Harry Chandler, a chauffeur employed by X. P. Huddy—the New York lawyer who is conducting the Johnston case in New Jersey, which is to test the constitutionality of the Frelinghuysen laws—raised a novel point when his case was called. Chandler filed a demurrer in which he contended that the court had no jurisdiction in disposing of his case. He had been arrested and charged with having violated the speed limit provision of the State motor vehicle law.

In his demurrer Chandler asked the court to dismiss the complaint against him on the ground that there is no State law regulating the speed limit for motor vehicles, for the violation of which he was on trial. He contended that the magistrate has no power to conduct a preliminary hearing for the purpose of holding the defendant for the Court of Special Sessions. He also declares that no section of the law can be repealed or altered unless a repeal section is included. He says that in 1902 a law was passed making it unlawful to operate automobiles at a speed greater than eight miles an hour in the city limits and 20 miles an hour outside the city.

In May, 1903, a new law was passed, but the Penal Code was not referred to and no special mention made to repeal any specific section. In 1904 another act was passed, but again the code was not referred to. Chandler also says that under the charter the Court of Special Sessions can deal with cases only where the fine would be $50 or less, and that it has no jurisdiction in the case of a misdemeanor, where a larger fine can be imposed. The case was adjourned until June 16 in order to give the District Attorney time to look up the law on the matter.

New Jersey to Improve Bergen Roads.

Great improvement, some of it much needed, is to be made in the roads of Bergen county, New Jersey. The State road department has recently agreed to pay its share for the rehabilitation of the Paterson plank road, and last week the State road commissioner, Colonel Frederick Gilkyson, approved the Fort Lee Hill road, where automobile accident after accident has occurred. A stone wall interferes with the view on a bad turn and the State improvement ideas contemplate changing this and reducing the grade, as well as purchasing the gore where the bad turn is, thus making a good road out of what now is a death trap.

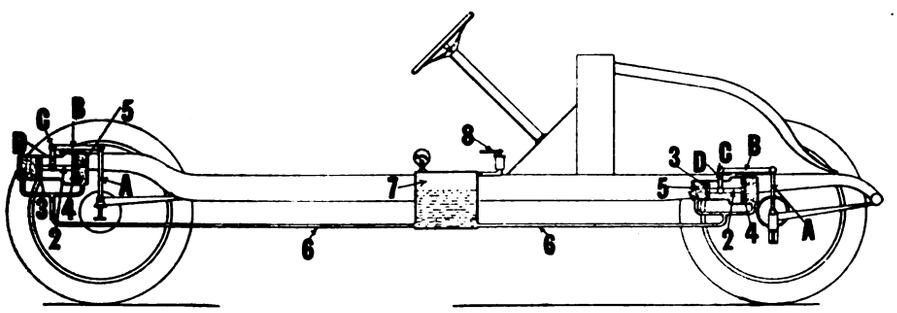
The State Department last week also approved plans for Haworth's drive, thus connecting the old Schrallemburg road to Westwood, Aetna and other places. One of the difficulties with Bergen county roads is that they all run north and south, and none of them east and west. This the commission intends to rectify so that one will not have to go to Jersey City to get across the county or to Hackensack on the further north side of the county.

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HYDRAULIC SUSPENSION SYSTEM

Radical Idea Applied in Device for Adjustment to Road Conditions—Control of Supports at Operator's Will.

Probably every one who has at any time considered the methods of suspension employed in motor cars has longed for a system by which it would be possible to alter the relative strength of the support to conform to existing road conditions. Were this possible, a car might be driven over rough and smooth roads with equal oscillation, by merely altering the adjustment of the supporting system. Another feature which is readily recognized as desirable is the corelation of the supports for the front and rear ends of the vehicle such that the rocking of the chassis from end to end



would be obviated. Both of these points are covered, theoretically at least, in a recent invention which has been patented in France by Louis Renault. It is a hydraulic system, in which all four supports of the chassis are controlled from a central reservoir in which the pressure may be varied at the will of the operator.

The method of arranging the organs of the system will be seen from the accompanying illustration in which A is a link attached to the axle and connecting with a rocker arm, B, which oscillates about a pivot point, C, on the frame. The rocker is really a sort of bell-crank lever, having a second arm, D, which is connected at its lower extremity with a piston rod, 2. This member serves as a connecting medium between two differential pistons, 3 and 4, which are free to move in the cylinders, 5, which also are fixed to the frame. The cylinders are piped through the leads, 6-6, to the central reservoir, 7, which is equipped with a pressure gauge and a pressure pump, 8.

The system is partially filled with some suitable liquid when in use, the level being such that the cylinders, and piping are filled, while a portion of the central reservoir is left free for the pneumatic head on which the balance and cushioning action of the arrangement depends. By this means, the pressures throughout the system are equalized, while any piston movement in one part of the system must be accompanied by a very slight corresponding movement in each of the other elements, subject, however, to the compressibility of the air in the main receiver.

In action, when a wheel strikes an obstacle in the road and the axle is raised, the movement is communicated through the linkage above described to the pistons, 3 and 4. The movement on the direct plunge of the chassis is such that the compression movement set up in the cylinders takes place in the larger of the two, and is partly counteracted by the displacement of the liquid contents of the group into the smaller cylinder. The capacity of this member being relatively small, however, a certain amount of liquid is driven back through the piping into the central reservoir. The increase in pressure thus developed, is, of course, imparted to each of the other sets of pistons and cylinders, all four of which are exactly alike.

When the wheel has crossed the obstruction and the axle tends to resume its normal position with relation to the chassis, the differential effect again comes into play to check the rebound, since in order to fill the space behind the larger piston a relatively great amount of liquid must be supplied, and because a certain portion of this must be driven out of the smaller cylinder by its piston. In this connection, it is seen that by regulating the flow through the cylinder ports, any desired amount of piston retardation may be effected. The relative resiliency of the system, naturally depends upon the air pressure in the central reservoir which, as it is regulable, may be altered to suit the conditions of the highway, and in a manner at once simple and convenient.

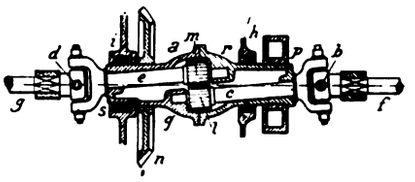
With the elimination of all springs in favor of compressed air, a gain is secured in resiliency, with a corresponding loss of the uncertainty attendant on the performance of all the mechanism involving the use of springs. The idea is decidedly appealing, especially since it provides for a degree of harmony between the supports of the front and rear ends of the machine which is entirely lacking from the suspensions in ordinary use. It is so very radical, however, that considerable demonstration of its properties will doubtless be required before it can be accepted by the public.

DIFFERENTIAL MINUS THE IDLER

New Adaptation of the Spur Gear Principle —Simple Method for Securing the Balancing Relation.

So common have the two most familiar types of differential gearing become, that there is a tendency to assume that possibilities in the line of a suitable balance gear for automobile use have been exhausted with the confirmation of the bevel and spur gear patterns. That such is not the case, however, is shown by the development of a new adaptation of the spur gear principle, which has lately been introduced abroad, and which is interesting for this reason, if for no other.

By the use of stub shafts which are slightly inclined instead of being parallel to the axle as is generally the case, the use of an idler has been dispensed with and the balancing relation secured by means of



two plain spur pinions on the ends of the shafts. In order to secure this simplification, however, the designer has been forced to employ two sets of universal joints in order to correct for the disalignment of the stub shafts. But by throwing the centers of the joints into the center line of the axle, the amount of joint motion has been reduced to a minimum.

The method of arrangement is illustrated in the accompanying drawings, from which it will be seen that the differential housing, a, encases the two stub shafts, c and e, which are connected to the driving axles proper at g and f, through the universal joints, b and d. The two pinions, m, l, furnish the compensating connection for the group.

Motion is supplied through the usual bevel gear, n, the turning moment actually transmitted evidently being proportional to the radius of gyration of the pinions about the center of the housing. The group is supported on ball bearings at h and i, while the brake drum is shown at p.

The system, which has been designed by M. G. Coccoti, is especially adaptible to light and low powered vehicles, and is particularly meritorious in regard to its small number of parts and their simple construction. As to its working efficiency, there would seem to be some question as to whether the gain secured by dispensing with the usual number of pinions is not more than counteracted by loss through motion in the universal joints.

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GROWTH OF MOTOR CAB SERVICE

Its Popularity in British Cities—The Mistake of Over-Powered Vehicles Pointed Out by a French Observer.

Leading the United States by a year and more in its adoption of the taximeter for motor vehicle use, and so of the taximeter cab, an amount of business has been built up in England which, even at the present time is amazingly large, notwithstanding the rapid increase in the employment of similar vehicles here. Nearly 1,000 taxicabs are now in use in London alone, and others have been ordered, while in the other larger cities of England a constantly increasing number of such vehicles is being put into service.

"It is only two years since the cab drivers were masters of the London streets," remarks Yves Guédon in La France Automobile. "They levied toll according to their own good pleasure, and the Englishmen, who have no love for argument paid them, grumblingly.

"But the times have indeed changed since then. The 'taxi-auto' has arrived and has modified profoundly the habits of the men of affairs of the English metropolis. The automobile fiacres—taxicabs, as the English have christened them—indicate exactly the amount which is to be paid, eliminating all exaggeration on the part of the chauffeur. The tariff is higher, but thanks to their speed, the taxicab trips become frequently less dear than those taken in cabs, and the Englishman is so chary of his time that for him this represents considerable money, which adds largely to their value.

"Under such circumstances the 'taxi-autos' rapidly became popularized in the English metropolis and now the red Renaults and the blue Unics are as familiar in London as in Paris.

"The first serious enterprise in the way of London motor cab service, dates back some 15 months. It is that of the General Motorcab Co., which is directed by the administrators of one of the great Parisian companies. Up to the first of last November it possessed 506 Renault taxicabs, precisely similar to the Parisian type."

There are now in London no less than eight taxicab companies, and still another is in process of formation, as he explains. These are: The General Motorcab Co., United Motorcab Co., Metropolitan Motorcab Co., F. I. A. T. Motorcab Co., Express Motorcab Co., London Motorcab Co., Carlton Garage, and the London Improved Cab Co. On the first of April, last, there were 958 taxi-automobiles in service on the London streets, divided among 12 different marks, as follows: 8-9 horsepower Renault, 643; 12-14 Darracq, 50; 14-16 Ballot, 17; 14-16 Rational, 12; 12-14 Argyle, 12; 10-12 Marples, 5; 10-12 Simplex, 4; 10-12 Humber, 2; 14-16 Thames, 1. Of these, the Renault, Marples and Simplex vehicles are equipped with two-cylinder motors, the Unic and Humbers with three-cylinder motors, and the remainder with motors of the four-cylinder pattern. Within some months the number will be increased by 500 new Renault machines which have been ordered already.

"The taxi-autos have not been slow in scattering over the United Kingdom as well," continues the above authority. "It should be remembered that besides London, England possesses innumerable cities and resorts, frequented from one year's end to another with a select population among which the automobile cabs have every opportunity of thriving.

"There are already 33 at Brighton; 22 at Liverpool, where one new company has just been established within a few days; 12 at Eastbourne, 6 at Bradford, 4 at Portsmouth, where there will be no less than 50 within a few weeks; 4 at Birmingham, 3 at Chester, 2 at Edinburgh, and 1 at Nottingham. In all these centers the companies have only just organized, with a minimum number of vehicles in service, but these will be augmented sensibly little by little. . . .

"The tariffs, though high enough, often are inferior to those which have been applied wrongfully and persistently by the 'cabbies.' In London, for instance, the rates begin at 8 pence (16 cents) for the first mile, with 2 pence (4 cents) for each succeeding quarter mile, and 2 pence for each 2½ minutes or fraction thereof when the cab it standing. At Edinburgh the tariff is 1 shilling (24 cents) for all trips of less than a mile or of a duration of 10 minutes, and 2 pence for each addition of a quarter of a mile. At Eastbourne the charge for the first mile is similarly 1 shilling, with 6½ pence (13 cents) for each succeeding half mile, and a similar amount for each 7½ minutes' delay. In other localities an attempt has been made to adopt the tariff of the horse-drawn vehicles, but these systems have not been in service a sufficient length of time to permit of judging successfully their monetary results.

"In London where the taximeters have already had 15 months service, the exploitation is developing profitably, even beyond the expectations of its promoters. When the first company, the General Motorcab Co., was created in 1906, the probable daily receipts were estimated at $9. In March, 1907, with only 45 machines, the average receipts had increased already to $10 and $13. They have remained somewhere around these two figures, and even increased during the four months of the London 'season,' which lasts from May to the end of July, to $14 and $16 a day. Adding that fuel and tires are cheap in England, the rapid extension of taxicab service among our neighbors across the Channel will not be surprising. There are fraudulent practices among the chauffeurs, to be sure, but they are not of sufficient importance to hinder the extension of the service.

"After Paris, London, Berlin and New York, have known the taxi-autos and have exploited them, as the public approves of their services which are beginning to be active in the affairs of the business man and, as in the century in which we live, time is becoming more precious than ever, the taxi-autos will not delay in spreading to all the large settlements and their environs.

"The experience of Paris has not been of much profit to the taxicab enterprises of London. In Paris, a city where traction is very poor, we already have made the mistake of employing machines with 10 to 15 horsepower motors of 2 and 4 cylinders, when the single cylinder motors of the 8 horsepower De Dion-Bouton type would have sufficed. In London the mistake is being continued and even aggravated. Motors of 6 horsepower would be sufficient in the ideal city with level roads, wide and well kept. Yet everywhere, even on the cabs of French manufacture, which are in the majority over those of English construction, they have installed motors of 10, 12, 14 and even 16 horsepower, of 2, 3 and 4 cylinders, making them necessarily more heavy, more costly in the matter of fuel consumption and mechanical upkeep as well as tires.

"When therefore, will our contractors of Paris and London settle upon the monocylindric motor of somewhere about 8 horsepower, which alone will assure economy in their service?"

Originality in Compression Release.

An ingenious application of the principle of the automatic inlet valve has been utilized in the reverse sense in a pet cock intended to be used for starting purposes, and recently introduced on the foreign market. Entirely supplementary to the hand-actuated cock which is employed to release the compression when swinging over the motor prior to starting, is a spring retained valve, which is adjusted to release at a predetermined pressure. At the same time this valve always is sealed with respect to the effects of suction. In consequence, though the required compression release is obtained at the point in the cycle where it is necessary, the suction stroke is carried out without any weakening of the charge due to the admission of air through the pet cock, such as occurs with the ordinary type of plain cock, or with some methods of pressure release by means of the exhaust valves, in which the latter are held open during the entire cycle.

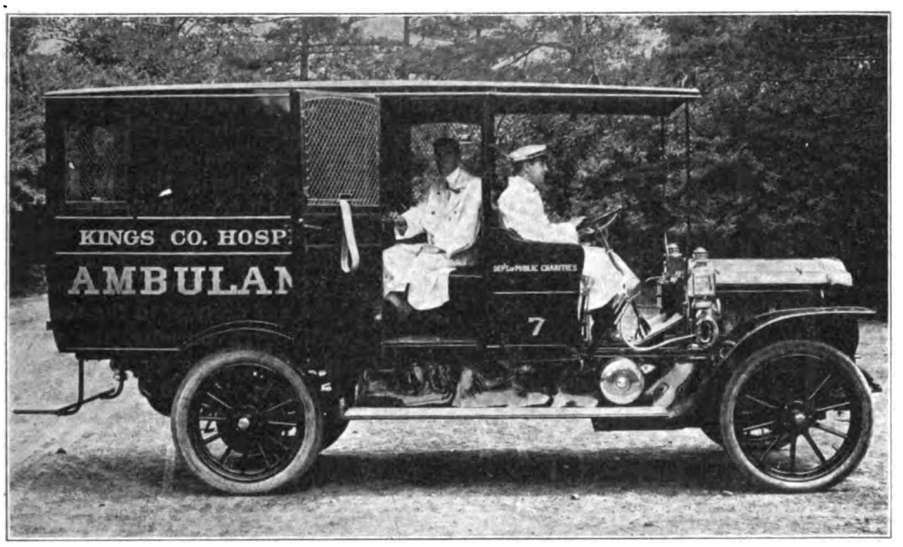
By adjusting the spring it is possible to secure the release at any point desired, thus ensuring sufficient compression to guarantee an effective starting impulse without creating too great a drag on the starting crank. At the same time, the fact that the piston invariably inducts charges of normal constituency makes easy starting an assured fact, regardless of speed of cranking.

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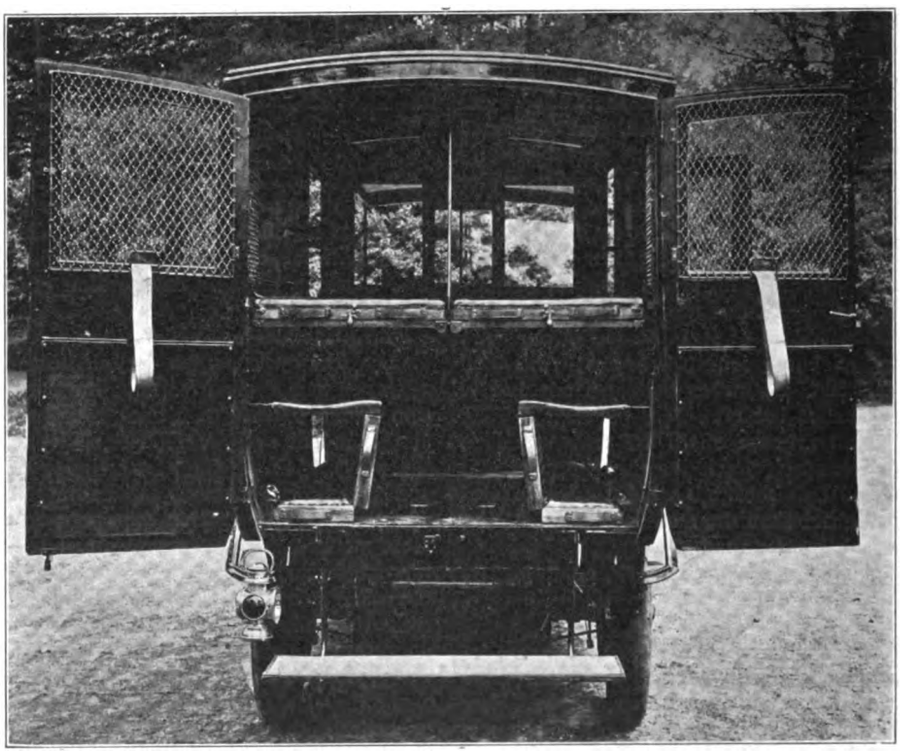
IDEAL AMBULANCE CONDITIONS

Ease and Protection for the Sufferer in New Automobile Type—Larger Capacity for Relief Service.

That the automobile is the best vehicle for hospital ambulance work is generally conceded, and although there are many and varied types of the automobile ambulance in operation quite the latest development in this direction is the vehicle that has just been constructed for the Kings County (N. Y.) Hospital, by the White company, Cleveland. As shown in the accompanying cuts a departure has been made by having a side door entrance for the surgeon, where he may sit at the head of the patient instead of at the foot, as in most ambulances. The advantage of this arrangement may be readily realized. The crowning feature of this new ambulance, however, is its great size, and the double-deck arrangement of the cots, which is so well worked out that any one of them may be folded out of the way and yet in extreme cases it would be able to convey six or even more persons to the hospital at one time. The value of this feature in large communities where at times the ambulance is in prequent requisition is obvious. Both the top and the bottom cots are on rollers, so that they may be moved without any jar to the patient.



AUTOMOBILE AMBULANCE OF KINGS COUNTY (N. Y.) HOSPITAL



INTERIOR VIEW SHOWING DOUBLE DECKED ARRANGEMENT OF COTS

Rubber Tires for Fire Department.

For the Fire Department of New York City, the Diamond Rubber Co. received in May, an order for 14,000 pounds of solid rubber tires. To this order, 12,000 pounds additional were added on June 10, making a total of 26,000 pounds of rubber the Diamond company is to furnish for the fire department's equipment for the coming year. The tires are of the internal wire and side wire type, and cover a great variety of sizes. A strong argument for the use of rubber tires for fire department work, is the fact that they do not cut the hose as engines, trucks, etc., arriving late at the scene of any fire, drive over the lines that have been laid.

Nebraskan Owners Multiplying Fast.

Automobile agents in the State of Nebraska are dispensing machines at the average rate of ten a day, judging from the report of the Secretary of State in the matter of new licenses taken out during the month of May. The total receipts from this source during the month amounted to exactly $354.20, and as the individual fee is $1, the average is fairly easy to compute.

WHEEL DIAMETER AND TRACTION

Tests Showing Astonishing Gain in Favor of the High Wheel—Requirements of Farm Vehicles Defined.

It is commonly understood, in accordance with the accepted theory on the matter, that the tractive effort required to draw a given load at a stated speed over a certain stretch of highway decreases as the diameter of the wheels is increased. But that the difference may amount to as much as a 21 per cent. reduction in the power requirement where 28 and 55 inch rear wheels are compared, with front wheels of correspondingly smaller proportions, is not generally appreciated. Yet such is the case, as was proved by a series of experiments carried out at the Columbia (Mo.) Agricultural Experiment station. The tests were applied to an ordinary farm wagon, and apply directly to animal drawn vehicles intended for farm work. The points made in relation to wheel diameters, however, are of general interest to the motor vehicle designer, while certain other of the observations are instructive as suggesting the requirements of motor vehicles destined to find a place in the extensive field of agricultural machinery.

According to a summary of Bulletin No. 52, of the institution mentioned, the draft required in each case, was determined by means of a Giddings self-recording dynamometer. The net load, which was uniform

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throughout the tests, was 2,000 pounds. Tests were carried out with three sets of wheels, all having tires 6 inches wide. Those known as the standard were of 44-inch diameter in front and 55 inches in the rear; the medium wheels were 36 and 40 inches in diameter, respectively, while the low wheels were 24 and 28 inches in diameter, respectively.

The general conclusions reached were: That for the same load, wagons with wheels of standard height drew lighter, or in other words, required less tractive effort, than those with lower wheels. The difference in favor of the standard wheels was greater on road surfaces in bad condition than on good road surfaces, and it was also observed that low wheels cut deeper ruts than those of standard height. That for most purposes wagons with low wheels are more convenient than those of standard height, particularly since wagons with broad tires and wheels of the standard dimensions are more cumbersome and require a greater amount of room in turning.

Diminishing the height of wheel from 44 to 36 inches in front and 55 to 40 inches in the rear, did not increase the draft in as great a proportion as it increased the convenience of loading and uploading the ordinary farm freight. Diminishing the height of wheels below 30 inches front and 40 inches rear, increases the draft in greater proportion than is gained in convenience.

In regard to the relative length of the front and rear axles, it was observed that while increasing the length of the rear axle so that the front and rear wheels would not run in the same track did not increase the draft on good roads, that effect was produced on bad roads, sod, and cultivated ground. The inconvenience of the long rear axle, the necessity of using wider gates, and the necessity of employing greater care in driving them than when driving wagons with equal length axles, was held to count against that method of construction. Hence the conclusion that: "The best form of farm wagon is one with axles of equal length, broad tires and wheels 30 to 36 inches high in front and 40 to 44 inches behind.

"As an average of all the tests made on gravel roads," concludes the summary, "it is found that the high wheels draw 2.1 per cent. lighter than the medium ones, and 21.2 per cent. lighter than the low ones, the medium wheels draw 18.8 per cent. lighter than the low ones."

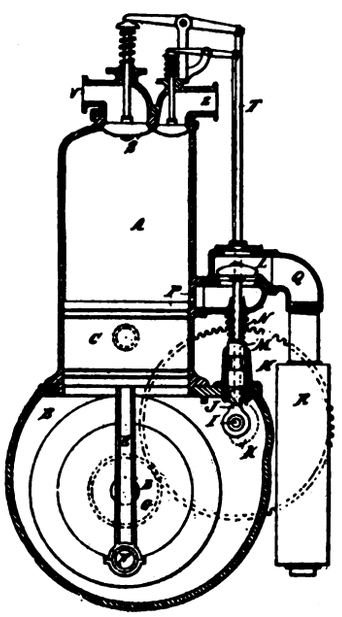
Taximeters on Horse-Drawn Cabs.

Hoping to regain at least a portion of the patronage which once was theirs, New York cabmen who are members of the cab-drivers' union, have installed taximeters on their horse drawn vehicles. Incidentally the traffic rates have been reduced so that passengers riding but half a mile will not be required to pay for a mile, as formerly was the rule. The half mile rate is 25 cents.

OLDS INVENTS SIX CYCLE MOTOR

Wall Port, Exhaust and Scavenging Valve Embodied in Patent—One Impulse Secured for Every Six Strokes.

Two-cycle and four-cycle motors abound, but the principle of the six-stroke cycle of operations is practically unknown, save in the laboratories of a few investigators who are working toward the improvement of the internal combustion motor. That any going or well known manufacturer was interested in the subject did not become generally known until last week, when there was issued a patent covering the principle to "Ransom E. Olds and Horace T. Thomas, Lansing, Mich., assignors to Reo Motor Car Co., Lansing, Mich., a corporation of Michigan."



The principle involved is that of the ordinary four-cycle motor, supplemented by a scavenging cycle involving the introduction and expulsion of a charge of pure air at the end of every combustion stroke, for the purpose of freeing the cylinder of the products of combustion, and cooling it. As the scavenging operation requires two complete strokes, and the operation of the motor otherwise is practically the same as in the most common form of engine applied to automobile use, the complete cycle of operations requires an interval of five strokes between impulses, or six strokes to every impulse. It is from this sequence of operations that the name six-cycle is derived.

The construction outlined in the patent specifications differs from that of the ordinary motor only in having a supplementary exhaust port at the side of the cylinder, opposite the end of piston travel, which is guarded by a mechanically operated valve, opening outward, and in the use of a valve gear so timed, that the large valve in the cylinder head, which replaces the ordinary exhaust valve, shall be opened during the exhaust stroke, and held open for the two complete strokes following, so that the scavenging charge may be drawn in and expelled without interference due to compression or "wire-drawing." The claims allowed by the Patent Office embody practically these features, and no others are covered by them.

The accompanying illustration suffices to explain the arrangement. At the end of the working stroke, the piston, C, uncovers the exhaust port, P, in the cylinder wall, and at the same instant the valve, L, is opened mechanically, releasing the waste gases to the manifold and muffler, Q-F. On the return, or properly, the exhaust stroke, the cylinder contents, which are at practically atmospheric pressure, are evacuated through the valve, S, also mechanically operated. The next down and up strokes of the piston are devoted to the scavenging action, with which purpose, the valve, S, is held open, permitting air to be drawn in through the port, V, and subsequently expelled. The other organs are substantially regular in form.

Practical Text Book on Lubrication.

Various ingenious methods of instructing drivers in the art of properly caring for the machines under their control have been designed by enterprising sales managers, but perhaps none is equal in merit to that recently put into effect by a British manufacturer as covering the requirements of sane and successful lubrication. The operations incident to this have been divided into four groups, covering operations which should be performed daily, those which may be carried out at weekly intervals, those which are of semi-monthly frequency, and those which have to be gone through once or twice a year. A series of photographs have been prepared, illustrating graphically the operations in each of these groups, and the series is being embodied in a forthcoming issue of the usual instruction book. The brevity and force of instructions so propounded reflects great credit on its originator and is of particular interest locally because the maker in question has instituted a competition for chauffeurs driving his cars, in which the decision rests wholly with the persistance and success with which lubrication is carried out.

Wear in Joints Requires Attention.

Wear in the joints of propeller shafts should be looked after with scrupulous care. Replacements should be made wherever adjustment is impossible, and the working parts kept in as close working order as possible always. There is more action in these parts than generally is supposed, and the least amount of play produces a continual knocking which is very destructive in its tendencies.

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TIRE INFLATION AND ITS EFFECTS

Relation of Pressure to Tractive Energy Shown in Tests—Their Bearing on the Heating of Tires.

Motorists in general have come to appreciate the importance of following the advice of the respective tire makers in the matter of inflation pressures, merely because it is understood that the tires wear longer under certain prescribed conditions than otherwise. That the tractive effort required to propel the vehicle, and so the speed which it develops under any gear, road surface or grade conditions may be affected by this same factor, however, is not generally appreciated. In fact the entire question of inflation pressures is none too well understood even by engineers, while the average user is quite in the dark as to the real influence which it may have both on the performance of the vehicle and on the life of the tire, except in the one important particular of ease of riding, on which observation alone suffices to inform him.

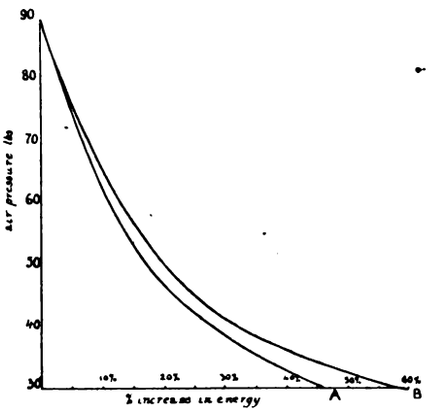
For this reason a series of tests covering this subject which have been made recently by Alex. Churchward, the well known electrical engineer, are of particular interest. These experiments which served to determine the relative amounts of energy consumed by the car under test with the tires inflated to different degrees of pressure, were carried out with an electric vehicle which was run upon a dynamometer so constructed that all four wheels were driven. The power delivered at the driving wheels was absorbed by a dynamo geared to the wheels of the dynamometer, and arrangements were made whereby observations might be made of the power consumed.

Accurate determinations were made as to the power losses in the vehicle motor and the transmission mechanism, so that the results here presented give the net variations in power due to the differences in tire pressure alone, and independent of all other considerations. The total weight of the machine under test was 2,100 pounds. The wheels were shod with 30 by 3½ inch tires, and the normal air pressure for the tires was 60 pounds. In carrying out the test the air pressure was varied from 30 to 90 pounds, the pressures being kept uniform on all four tires.

The results show a very marked increase in the tractive energy required to maintain any given speed, the minimum requirement being at 90 pounds pressure. With the energy required at 90 pounds as a basis, therefore, the accompanying curve was developed showing the relative increases of energy as the pressure was diminished. The curve, A, was determined on the basis of an average speed of 10 miles per hour, while the curve, B, was plotted from results of trials which were made at 19 miles per hour, average speed.

From the curves, it will be seen that some 11 per cent. more energy was required to propel the vehicle at 10 miles an hour with the tires inflated to 60 pounds than when the pressure was raised to 90, while when the vehicle was being driven at 19 miles per hour, the increase amounted to a little over 13 per cent. Similarly, with 30 pounds tire pressure, the increases in energy consumed were, respectively, 47 and 60 per cent.

These results have an important bearing on a more or less heated controversy which has been aroused in England recently as a result of one of S. F. Edge's exploits when he drove a Napier car over a measured quarter mile on the Brooklands motordrome several times, with different tire pressures. His conclusion was that practically the same speed could be attained with the tires inflated to only 45 pounds as when they were



inflated to 100 pounds. Later he voiced the opinion that with the tires inflated to a high degree, the wheels were kept off the ground a considerable portion of the time, the rapid succession of sharp impacts resulting, causing bursts and rapid wear. With lower inflation pressures, he asserted that longer tire life was to be expected, provided only that the tire was so constructed that it could stand a relatively great amount of flexure without suffering from internal friction.

Following this pronouncement, a British tire concern has issued a new table of inflation pressures, advocating much lower degrees of inflation than had been their custom, while considerable discussion was aroused in defense of the time-honored theory that hard pumped tires must be "faster" than those subjected to lower degrees of inflation. It should be observed also that recent experiments made in England with a medium powered gasolene car in successive hill climbing trials under varied conditions of tire inflation have furnished an apparent confirmation of the Edge experiments, but under the modified conditions of the grade and a lower rate of speed.

Closely bearing on the subject of the energy requirement of the vehicle, is the question of heating of the tires. Of this, Mr. Churchward states that he has found the heating to be influenced to a great extent by the chord of the tread, or the length of tread in contact with the ground.

"The longer the chord of tread with a given tire," he says, "the greater the amount of energy consumed—therefore, the hotter the tire will get. This is due to the greater flexing and kneading of the side walls and tread of the tire as it comes in contact with the ground."

With regard to the Brooklands demonstration that a large tire does not slow down a racing car, he says:

"I found from tests that it does not take more energy to drive a vehicle with a large tire and a lower air pressure, provided the chord of tread is approximately the same in both cars. Therefore it does not seem to me that the size of tire and air pressure in same would influence the speed much.

"As the percentage of energy consumed by the tires in a racing car is small compared with that due to windage, it is in the small powered car we find that the tires influence the speed and mileage. Also the type of tire used will have in many cases a direct influence, as at 15 to 20 miles per hour the wind resistance is small, but the tire loss great."

Neglect of the Fan Unwise.

Very many drivers seem to think that the fan on a water cooled car is of little importance. That this idea of the utility of the fan is generally held, is proven by the number of cars on which the fan is out of order. Usually its inactivity is due to a broken belt which, though but a few minutes would be required to make all necessary repairs, is allowed to remain broken until, for lack of something else to do, some one will make the simple repair. But the fan serves an important purpose, and should be kept in condition. Now that the hot weather is here, all devices which work to keep the cylinders cool should be required to do their full duty. If this fact is kept in mind the efficiency of the power plant will be increased.

Smoke Symptoms of Cylinder Lubrication.

Smoke as a test for thoroughness of cylinder lubrication is a popular, though by no means conclusive form of evidence on which many drivers are prone to rely. It should be borne in mind, however, that the mere fact that the exhaust is smoky does not indicate that the lubrication is complete, or rather excessive in all the cylinders. If the smoke issues from the discharge pipe of the muffler in a steady and practically continuous stream, this is the case. But if it comes in intermittent puffs, it may be taken as proof that only one compartment of the crank case is flooded, the other or others, being starved. Such a condition may indicate different rates of flow in the various feeds, or a total cessation in one or another. At all events it reveals a condition which will bear close scrutiny.

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MAKING A "CONSISTENCY" RUN

Century a Day for a Century of Days the Schedule—Practical Demonstration of Motor Car Reliability.

A century a day for a century of days is the ambitious program now being carried out by a Premier car in an effort to demonstrate the ability of the modern motor car to perform a consistent day's work day after day continuously. The car was started on its 10,000 miles trip on Monday, 1st inst., at Indianapolis, when it was set in motion at the Soldier's monument by Chief of Police Metgzer. The first day's trip was east



PREMIER CAR SCHEDULED TO RUN 10,000 MILES IN 100 DAYS

over the National road, where it met the Glidden Premier pathfinder, which was on its way back from laying out the route for the annual tour.

Since its initial trip the car has made its daily century in and around Indianapolis without mechanical mishaps and escaping even the puncture of a tire. On the 14th inst. its base of operations was transferred to Chicago, which city it reached at 2 p. m. on that day. Its odometer showed at that time a record of 1,519 miles. As at Indianapolis, a different route will be selected for each day's trip and a full complement of passengers will be carried. Buffalo, Philadelphia, Boston, New York and other cities will be included in the list of centers from which series of centuries will be run, and it is intended to make the test over every sort of American road. The century of centuries is scheduled to be completed on September 8th.

Automobile Track for Long Branch.

After a vacation of several years, Long Branch, N. J. is to spring into the limelight again as an automobile racing center. Since horse racing was abolished in New Jersey, the mile track at Elkwood Park, near Long Branch, has been practically idle with the exception of one or two automobile races that have been held upon it.

If the plans of the Elkwood Park Automobile Association, which was formed last week by several Long Branch cottagers, mature, the Elkwood Park track will be the scene of several race meets this summer, the first of which will occur on July 4th. Mayor Charles C. McFadden, of Long Branch, is president of the association; M. Robert Guggenheim is vice-president and William D. Anderson is treasurer. Thomas Francis Moore, the New York press agent, who has been jobless since the Briarcliff Trophy race, is to exploit the venture in the role of secretary. On the board of directors are Harry Payne Whitney, Fred Lewisohn, W. E. D. Stokes, P. J. Casey, Walter Lewisohn and Martin H. Vogel.

It is stated that the new association will repair the grandstand and that additional banking will be added to the track. It is the intention to hold race meets as often as possible and as long as the seashore resorters remain interested. The program for the first meet on July 4th includes a 100 miles endurance race, a 50 miles event for amateur drivers, 5 and 10 miles events for stock cars and time trials at one and two miles. Several fast cars already have been entered.

Running Apology for Raising Dust.

No small interest was aroused at a gymkhana contest in England recently by the appearance of one of the cars which bore upon the front of its dash board and running the full length, a sign bearing the inscription: "Sorry for the dust, which we raise but do not make." The upper half of the sign was hinged lengthwise and made to fold over the lower part ordinarily, but by a simple movement, the driver was able to raise it, displaying the apologetic legend to offended pedestrians and others to avert any possible misplacing of blame.

"AROUND THE WORLD" IN A DAY

Picturesque Automobile Fete Serves Benevolence in Montclair—Foreign Capitals Amid New Jersey Hills.

Montclair's nurses' fund of the Society of New England Women, the gymnasium fund of the Pilgrim's Congregational Church and the Young Men's Christian Association were enriched jointly by more than $2,000 realized at the "automobile trip around the world," held there on Saturday last, 13th inst. Although not new the unique idea met with popular favor with the New Jersey villagers. Nearly 150 cars were required in carrying the passengers from one city to another.

"Grand Central Station" was represented at the church, and when the first "train" pulled out nearly 1,000 people were in waiting. The committee ran the cars on short schedule, but even then they could not accommodate the crowds and a subway crush at Grand Central Station, New York City, on any afternoon at 5.10 was mild in comparison.

From "Grand Central Station" the passengers were conveyed to "Pekin," thus putting to shame all around the world records. From "Pekin" the route led to "Madrid," taking a jump back to "Yokohoma," then a side step to "Berlin" and finally to "Constantinople." The various residences which represented these cities were decorated characteristically, and provided with booths at which the passengers could purchase souvenirs brought direct from the foreign cities.

At "Yokohoma" the guest of honor was Kokokichi Midzuno, the Japanese Consul-General at New York, and his wife and two children in native costume. At "Pekin" there were a number of native Chinese, picturesquely attired, and at the other cities the scenes were effective by reason of the gay costumes and picturesque decorations. The proceeds go to the charities mentioned.

Brattleboro Club Elects Officers.

At its annual meeting held last week the Brattleboro (Vt.) Automobile Club elected the following officers: President, Charles T. Harris; vice-presidents, Charles W. Dunham and Ferris R. Vaughan; secretary-treasurer, Edwin B. Whitney; directors, William V. Vinton, John B. Manley and Charles A. Smith.

Nebraskans Organize Club at Lincoln.

The Lincoln Automobile Club has been organized in the Nebraskan city of that name with these officers: President, Dr. W. L. Dayton; first vice-president, Dr. W. Davis; second vice-president, Walton G. Roberts; secretary-treasurer, George Holmes; directors, Ernest Ames, F. C. Fiske, and Irving Chapin.

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OHIO "AUTOMOBILE LAW" IN FORCE

Full Text of Its Provisions—Badges for Chauffeurs—The Two-Thirds of the Road Requirement.

Ohio's new law, designated by one of its provisions the "Automobile Law," went into effect on June 11th. In many respects it is identical with the New York law. It provides for registration in the office of the Secretary of State of all motor vehicles owned and operated in the State, except motorcycles, motor trucks or drays used exclusively for commercial purposes, road rollers, traction engines, fire engines, police patrol wagons and ambulances. It recognizes the term "chauffeur" which it defines as meaning any person operating a motor vehicle for hire or as the employe of an owner, and it requires the registration of such persons and the wearing of a badge showing the registration number. The registration fees are fixed at $5 for gasolene vehicles, and $3 for electrics. The chauffeur's license fee is $2.

Speed is limited to 8 miles an hour in the business and closely built up sections of municipalities; 15 miles in other portions of such municipalities, and 20 miles elsewhere in the State. Local authorities are prohibited from making any speed regulations, but may define what are the business and closely built up portions of their respective municipalities.

The penalties provided for violation of provisions of the law consist almost wholly of fines, increased for second and subsequent offenses. The fines range from $25 to $300. Where the penalty of imprisonment is provided it is alternative with the fine, and in no case is an offender to suffer both forms of punishment, except for the display of a borrowed or fictitious number subsequent to a first conviction for such an offense. Suspension for a period of not less than one year nor more than two years is the extreme penalty provided for chauffeurs in case of a second or subsequent conviction.

In its other provisions the law is along the general lines of those enactments in other States, such as New York and Connecticut, which are regarded favorably by automobilists. The one extraordinary feature in it is that which requires that "all persons riding on horseback, or on a bicycle, tricycle, tandem bicycle, locomobile, automobile, or motor vehicle, shall, on meeting carriages or vehicles of any description, keep to the right so as to leave two-thirds of the road free." The full text of the law follows:

Section 1—That the term "motor vehicle" as used in this act, except where otherwise expressly provided, shall include all vehicles propelled by any power other than muscular power, except motor bicycles, motorcycles, motor trucks or drays used exclusively for commercial purposes, road rollers, traction engines, fire engines, police patrol wagons, ambulances and such vehicles as run only upon rails or tracks.

Sec. 2—The term "local authorities" shall include all officers of counties, cities, villages or towns, as well as all boards, committees and other public officials of such counties, cities, villages or towns.

Sec. 3—The term "chauffeur" shall mean any person operating a motor vehicle for hire, or as the employe of the owner thereof.

Sec. 4—The term "State" as used in this act, except where otherwise expressly provided, shall include the territories and the federal districts of the United States.

Sec. 5—The term " owner of" or "person hereafter acquiring" shall include any person renting a motor vehicle or the exclusive use thereof, under a lease or otherwise, for a period greater than thirty days.

Sec. 6—Every owner of a motor vehicle or vehicles, which shall be operated or driven upon the public roads or highways of this State, shall annually for each motor vehicle owned or acquired, except as herein otherwise provided, cause to be filed by mail or otherwise, upon the payment of a registration fee of five dollars for such gasolene or steam motor vehicle, and a registration fee of three dollars for each electric motor vehicle, in the office of the Secretary of State, an application for registration, containing:

A brief description of the vehicle to be registered, including the name of the manufacturer, the manufacturer's number of the motor vehicle, if number there be, the character of the motor power, and the amount of such motor power stated in figures of horsepower.

The name and address of the owner of such motor vehicle, and the name of the county of the State in which he resides.

But any person to whom an annual 1908 license has been issued by any municipality of this State prior to the time when this act shall take effect, shall be exempt from the provisions of sections 6, 7, 8, 9, 10 and 11 of this act up to and until January 1, 1909.

Sec. 7—Upon the filing in the office of the Secretary of State of an application as hereinbefore provided, the Secretary of State or his duly authorized agent shall assign to such motor vehicle as described in such application a distinctive number, and shall issue to the owner of such motor vehicle, as it is described in the application filed, a certificate of registration, which certificate shall be in the form of a card, which may be carried in the pocket and which certificate shall contain the distinctive number so assigned to such motor vehicle, the name and the address of the owner, a brief description of such motor vehicle, stating the name of the manufacturer, the manufacturer's number, if number there be, the character of the motor power, and the amount of such motor power stated in figures of horsepower.

Sec. 8—Upon the receipt of an application for registration of a motor vehicle as hereinbefore provided the Secretary of State shall thereupon file such application in his office and register such motor vehicle, with the name and address of the owner thereof, and the facts stated in the application, in a book or index to be kept for the purpose, under the distinctive number and identification mark assigned to such motor vehicle by the Secretary of State, and issue to the applicant a certificate as hereinbefore provided. The original book or index in which the motor vehicles are registered as hereinbefore provided shall be kept in the office of the Secretary of State, and shall be open to the inspection of any person during reasonable business hours. An exact, full and accurate list of registered motor vehicles and their owners shall be furnished by the Secretary of State to the clerk of every county in the State, and such lists shall be kept as public records, in books to be furnished by the Secretary of State, in the office of such county clerk, and the Secretary of State shall further furnish to the county clerk of each county, once each month, copies of the additional applications for registration received, which shall be entered by the county clerk on the list kept by him as hereinbefore provided.

Sec. 9—That every motor vehicle, registered in accordance with the provisions of this act, shall have the distinctive number and registration mark assigned to it by the Secretary of State and furnished by the Secretary of State, in accordance with the provisions of section 10 hereof, as hereinbefore provided, displayed on the front and rear of such motor vehicle, as an identification mark, securely fastened, so as not to swing.

Sec. 10—That such distinctive number as an identification mark shall consist of a blue placard, as the background, upon the face of which shall appear the distinctive number assigned to such motor vehicle as hereinbefore provided, in white Arabic numerals, such numerals to be not less that four inches long, nor each stroke less than one-half inch in width, such number to be followed on the placard by the initial or abbreviation of the name of this State in white letters, each letter to be at least two inches in height, and each stroke to be at least one-half an inch in width.

Sec. 11—That in the case of a manufacturer or dealer in motor vehicles such manufacturer or dealer shall make applications for registration in the same manner as hereinbefore provided, of each gasolene, steam, electric or other make of motor vehicle manufactured or dealt in by such manufacturer or dealer, whereupon, upon the payment of a registration fee of ten dollars ($10.00) there shall be assigned to such style or type of motor vehicle a distinctive number as an identification mark, which shall be carried and displayed by every motor vehicle of such style or type registered in the same manner as hereinbefore provided, while such vehicle is being operated on the public highway, and until such vehicle shall be sold or let for hire, and there shall be issued to such manufacturer or dealer a certificate of registration as hereinbefore provided for each gasolene, steam, electric or other make of motor vehicle, and as many certified copies thereof as may be desired, upon the payment of a fee of two dollars ($2.00) for each such copy.

Sec. 12—Every motor vehicle operated and driven upon the public roads or highways of this State shall be provided with adequate brakes sufficient to control the vehicle at all times and a suitable and adequate bell, horn or other device for signaling, and shall during the period from thirty minutes after sunset to thirty minutes before sunrise display three white lights, two on the front and one on the rear of each motor vehicle, the rays of which rear lamp shall shine upon and illuminate each and every part of the aforesaid distinctive number borne upon that part of the motor vehicle, the light of which front lamps shall be visible at least two hundred feet in the direction in which said motor vehicle is proceeding, and every motor vehicle shall also display, in addition to the foregoing, a red light on the rear thereof.

Sec. 13—The provisions of the foregoing sections shall not apply to motor vehicles owned by non-residents of this State, provided that the owners thereof shall have complied with the provisions of the law of

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the State of their residence in regard to motor vehicles, and shall comply with such law while operating and driving a motor vehicle upon the public roads or highways of this State: Provided, however, that the foregoing sections of this act are substantially in force as law in the State of the residence of the owner of such motor vehicle, otherwise all provisions of this act shall apply.

Sec. 14—No person shall operate a motor vehicle on the public roads or highways of this State at a rate of speed greater than is reasonable or proper, having regard to width, traffic and the use of the highway and the general and usual rules of the road or so as to endanger the property or life or limb of any person, or the safety of any property.

Sec. 15—In no event shall any automobile, motorcycle or other motor vehicle be operated at a greater rate of speed than 8 miles an hour in the business and closely built up portions of any municipality in this State, nor more than 15 miles an hour in the other portions of such municipalities, nor more than 20 miles an hour outside of such municipalities, which rates of speed shall not be diminished nor prohibited by any ordinance, rule or regulation of any municipality, board or other public authority, but municipalities may by ordinance define what are the business and closely built up portions of such municipalities.

Sec. 16—Any operator of a motor vehicle, upon meeting or overtaking a horse-drawn vehicle, or person on horseback, shall slow down and stop said motor vehicle when signaled so to do and shall remain in such condition until said horse-drawn vehicle or person on horseback shall have safely passed.

Provided, however, that such signal to stop shall be given in good faith and under the necessity of the circumstances, and only so often and for such length of time as shall be required to permit said vehicles to safely pass, whether approaching from the front or the rear. In case of accident to a person or property on the public highway, due to the operation thereon of a motor vehicle, the person operating such vehicle shall stop, and, upon request of a person injured, or any person present, give such person his name and address, and, if not the owner, the name and address of such owner.

Eec. 17—Every person hereafter desiring to operate a motor vehicle as a chauffeur shall file in the office of the Secretary of State, upon the payment of the registration fee of two dollars ($2.00) an application for registration which shall state: The name and address of the applicant, and that he is competent to operate a motor vehicle; the trade name and the kind of motor power of the vehicles or vehicle he is competent to operate; and whether or not the applicant has ever been previously convicted of a violation of any of the provisions of this act, giving the date and place of such conviction, and the provisions of this act violated, if any.

Sec. 18—Upon receipt of such an application, the Secretary of State shall thereupon file the same in his office in a book or index, which shall be kept in the same manner as the book or index for the registration of motor vehicles, as hereinbefore provided, and the Secretary of State shall forward a list of such registered chauffeurs, and such additions thereto, as shall be made from time to time, to the county clerk of every county in the State, in the same manner as hereinbefore provided in the case of registered motor vehicles, and such lists shall be kept as public records in the county clerk's office in every county in the State.

Sec. 19—The Secretary of State shall forthwith upon the registration of such chauffeur, as hereinbefore provided, issue to such chauffeur a badge of aluminum or other suitable metal which shall be oval in form and the greater diameter of which shall not be more than two inches; and such badge shall have stamped thereon the words, "Registered Chauffeur No. ....; State of Ohio, ...;" with the registration number inserted thereon, which badge shall thereafter be worn by such chauffeur, fastened upon his clothing in a conspicuous place at all times, while he is operating a motor vehicle upon the public roads or highways of this State.

Sec. 20—No chauffeur having registered as hereinbefore provided shall voluntarily permit any other person to wear his badge, nor shall any person while operating a motor vehicle upon the public roads or highways of this State wear any chauffeur's badge, belonging to another person, fictitiously representing himself to be a registered chauffeur.

Sec. 21—No person shall operate a motor vehicle as a chauffeur on the public roads or highways of this State, subsequently to thirty days after this act takes effect, unless such person shall have complied in all respects with the requirements of this section; provided, however, that a monresident chauffeur, who has registered under the provisions of the law of the State of his residence, which are substantially similar to the provisions of this section, shall be exempt from registration under this section; provided, however, that he wear a badge assigned to him in the State of his residence in the same manner as hereinbefore provided, and comply with all the other provisions of this section.

Sec. 22—No chauffeur or other person shall drive or operate or cause to be driven or operated, any motor vehicle upon any public road or highway of this State in the absence of the owner or such motor vehicle, without such owner's consent.

Sec. 23—No local authority shall have any power to make any ordinance, by-law or resolution regulating the speed of motor, provided, however, that local authorities may set aside for a given time a specified public highway for speed tests or races.

Sec. 24—The violations of sections 6, 9, 11 and 12 of this act shall be punishable by a fine not exceeding twenty-five dollars ($25) for a first offense, by a fine not less than twenty-five dollars ($25) and not exceeding fifty dollars ($50) for a second offense, and by a fine not less than fifty dollars ($50), and not more than one hundred dollars ($100) or imprisonment for not more than thirty days for a third and subsequent offense.

Sec. 25—Any violation of section 14, 15 and 16 of this act shall be deemed prima facie evidence of a misdemeanor punishable by a fine not exceeding twenty-five dollars ($25) for a first offense, and by a fine not less than twenty-five dollars ($25) and not exceeding fifty dollars ($50) for a second offense, and by a fine not less than fifty dollars ($50) and not more than one hundred dollars ($100) or imprisonment for not more than thirty days for a third offense, and for any subsequent offense, within one year, imprisonment for not less than ten days, nor more than thirty days.

Sec. 26—Any person operating or driving a motor vehicle on the highways of this State, which shall display thereon a distinctive number or identification mark belonging to any other motor vehicle or one which is fictitious, shall be deemed guilty of a misdemeanor, which shall be punishable by a fine of twenty-five dollars ($25) for a first offense and for any subsequent offense by a fine not less than fifty dollars ($50) or more than three hundred dollars ($300) or imprisonment for sixty days or both.

Sec. 27—Any violation of section 17, of this act, by a person not registered as a chauffeur, as hereinbefore provided, shall be punishable by a fine of not more than fifty dollars ($50) or the suspension of the right to apply for registration as a chauffeur, under this act, for one year or both, and for a subsequent or second offense by a fine of not more than one hundred dollars ($100) and in addition the suspension of the right to apply for registration as a chauffeur for a time not less than one year or more than two years.

Sec. 28—Any violation of sections 19, 20 or 21 of this act, by a chauffeur, registered as hereinbefore provided, shall be punishable by a fine not exceeding fifty dollars ($50), or by the suspension of the right to operate a motor vehicle as a chauffeur under the provisions of this act for a period of six months or both, and for a second or subsequent offense by a fine of not less than fifty dollars ($50) and not exceeding one hundred dollars ($100) and in addition the suspension of the right to operate a motor vehicle as a registered chauffeur under the provisions of this act for one year, and for such further time as shall be fixed by the trial court.

Sec. 29—Any violation of section 14, 15 and 16 of this act by a registered chauffeur shall be a misdemeanor and punishable as provided in section 25 and in addition thereto a suspension of the right to operate a motor vehicle as a registered chauffeur as hereinbefore provided for thirty days for a second offense and for a period of not less than one year for a third offense, in which case the registration of such chauffeurs shall become null and void.

Sec. 30—Any person violating any of the provisions of section 22 of this act shall be deemed guilty of a misdemeanor, and upon conviction shall be fined a sum not exceeding two hundred dollars ($200) or imprisonment for a period not exceeding six (6) months or both in the discretion of the court.

Sec. 31—Upon the conviction of any person for a violation of any of the provisions of this act, the magistrate or other judicial officer, before whom the proceedings are held shall immediately certify the facts of the case and the character of the punishment to the Secretary of State, who shall enter the same, in the case of an owner or chauffeur, either in the indices of registered motor vehicles or registered chauffeurs, as the case may be, opposite the name of the person convicted, as in the case of any other person, in an index of offenders to be kept for such purpose, in alphabetical order. The Secretary of State shall then send notice of the conviction and the punishment of all such persons, whether owners, chauffeurs, or other persons to the county clerk of every county in the State, who shall enter the same upon the lists of registered motor vehicles or registered chauffeurs, as the case may be, which are kept by him as hereinbefore provided, or upon a list of other offenders which he shall maintain in his office as a public record in the same manner as the registered lists of motor vehicles or chauffeurs as hereinbefore provided for, and shall furnish copies of such lists to the magistrates or other judicial officers of his county by whom the offenses against the provisions of this act are punishable.

Sec. 32—In case any person shall be taken into custody because of any violation of any of the provisions of this act, he shall forthwith be taken before any magistrate or justice of the peace in any city or village or county, and be entitled to an immediate hearing; and if such hearing cannot be held shall be released from custody on giving his personal undertaking to appear in answer for such violation at such time or place as shall then

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be indicated, secured by a deposit of a sum equal to the maximum fine for the offense with which he is charged, or in lieu thereof, in case the person taken into custody is the owner, by leaving the motor vehicle, and in case the person taken into custody is not the owner by leaving the motor vehicle with a written consent given at the time by the owner, who must be present, with such judicial officer; or in any case, if such judicial officer is not accessible, shall be forthwith released from custody by giving his name and address to the person making the arrest and depositing with such arresting officer a sum equal to the maximum fine for the offense for which such arrest is made, or in lieu thereof, in case the person arrested is the owner by leaving the motor vehicle, and in case the person is not the owner, by leaving the motor vehicle with a written consent given at the time by the owner, who must be present; provided, that in such case the officer making the arrest shall give a receipt in writing for such sum or vehicle deposited and notify such persons to appear before the most accessible magistrate, naming him, specifying the date, place and the hour.

In case such undertaking with security or deposit shall not be made by an owner or other person taken into custody, the provisions of law in reference to bail in cases of misdemeanors shall apply.

Sec. 33—The revenues derived from the registration fees provided for herein shall be applied by the Secretary of State toward defraying the expenses incident to the carrying out and enforcement of the provisions of this act, and any surplus thereof shall be paid by the Secretary of State into the treasury, monthly. All actions for injury to the person or property caused by the negligence of the owner of any automobile included within the provisions of this act, may be brought by the party injured against the owner of such automobile in the county wherein such injured party resides. In case such action is begun, a summons against any defendant or defendants shall be issued to the sheriff of any county within the State of Ohio, wherein such defendant or defendants reside, to be served upon such defendant or defendants, as in other civil actions, any law to the contrary providing for the service of summons in civil actions notwithstanding.

Sec. 34—All moneys coming into the treasury, pursuant to this section, shall be there maintained as a separate fund for the improvement, maintenance and repair of the public roads and highways of this State, and shall be apportioned as the State highway fund is apportioned by law.

Sec. 35—This act shall be known as the "Automobile Law," and shall take effect and be in force from and after thirty days after its approval by the Governor.

Sec. 36—That section 3490 of the Revised Statutes be amended so as to read as follows:

Sec. 3490—All persons driving carriages or vehicles of any description on any public turnpike, road or highway of this State, shall, on meeting carriages or vehicles of any description keep to the right so as to leave half of the road free, and all persons riding on horseback, or on bicycle, tricycle, tandem bicycle, locomobile, automobile, or motor vehicle, shall, on meeting carriages or vehicles of any description, keep to the right so as to leave two-thirds of the road free.

Sec. 37—That section 3490 approved April 23, 1904, and an act entitled, "An act to compel owners and operators of motor vehicles to register with the Secretary of State," passed April 2, 1906, be and the same are hereby repealed.

SECURING RESPECT FOR THE LAW

Efficacy of Mild Measures for Enforcement Practically Exemplified — Motorists Heed Timely Suggestions.

Two examples of what may be effected in securing observation of the law by motorists through appealing to their sense of right are afforded by the town of Middleboro and the city of Newton, both in Massachusetts. The town authorities of Middleboro and the local automobile club co-operated in a plan for placing along the roads through the town banners offering fair play to the passing automobilists and asking fair play in return. The basis of this reciprocity is a speed limit of 12 miles an hour through the town, and the plan has been found to work well.

Placing the responsibility of reasonable driving upon the automobilists themselves is a plan which has been followed in many instances with gratifying success by Chief of Police Mitchell of Newton. Letters to individual, and perhaps unintentional offenders, and numerous signs setting forth the speed regulations and location of dangerous corners, have been used with excellent results by the police of that city.

"A large majority of automobilists who drive over the streets throughout Newton are careful drivers," Chief Mitchell says. "It is but a small number who flagrantly disregard the written and unwritten laws of the road and cause trouble. Frequently reports are made by patrolmen and civilians that machines are run at excessive speed through different streets, around dangerous corners or on the boulevard roadway reserved for horse-drawn vehicles.

"We make it a point to secure the numbers of such machines. We then write a brief letter to the owners, setting forth the day, time and place that their machines were run in alleged violation of the law, and notifying them that they must exercise care in driving within the limits of this city.

"This plan was adopted three years ago. Some weeks but a few letters will be sent out, while in other weeks a dozen or more are mailed. The plan has been very successful in stopping individual alleged offenders. It will be followed during the present season," said Chief Mitchell. In addition to the signs along various frequented thoroughfares setting forth the speed regulations, there have been erected signs warning automobilists to slow down to low speed."

Toll Roads Must be Open to Automobiles.

Pennsylvania automobilists won a big victory at Wilkes-Barre on Monday last, 15th inst, when Judge Halsey in a lengthy opinion declared that no toll road company has a right to keep automobiles off its road. The toll roads around Wilkes-Barre have been a bone of contention between automobilists and the companies operating them for several years and the case which brought the opinion was watched with more than ordinary interest.

The case in point was that of W. W. Scranton, of Scranton, against the Laurel Run Turnpike Co., which owns the beautiful boulevard driveway over the mountains from Wilkes-Barre to Bear Creek, and which, ever since the road was opened, has been closed to automobiles. Scranton decided to make a test case and be brought suit after being refused admittance.

Judge Halsey decides that under the act of 1874 an automobile must be included in the general designation as a carriage of pleasure, under whatever name it may go, and as such is to be admitted on all public highways, a point which automobilists have been endeavoring to make many judges see for several years.

Judge Halsey refuses to concur with the allegation of the company that the law fixes no lawful and reasonable toll for automobilles and orders that the road shall be opened to them at once. If all the toll companies in Pennsylvania respect the ruling of Judge Halsey, motoring in the hilly section, in which these toll roads abound, will become a pleasure instead of a hardship and distances between points of interest will be materially shortened.

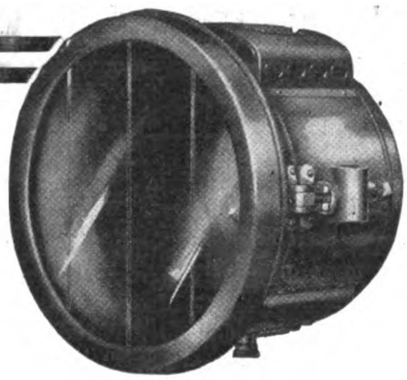
New Massachusetts Court for Motorists.

Among the latest acts of the Massachusetts legislature, now adjourned, was the passage on the 10th inst. of the automobile bill which originated with the Safe Roads Association of that State. Under the new law the State highway commission becomes both an executive and a judicial body, for it not only is obliged to execute the laws, but it may go ahead and investigate cases and summon witnesses the same as any court. There is also provided in the new bill a section for the employment of investigators to delve into accident cases in the same way the Safe Roads Association does. There is a provision that requires the commission to revoke the license of an operator of a car who figures in serious accident, and who upon conviction, appeals. Unless the person is acquitted in the upper court, or the commission on investigating the facts finds there are mitigating circumstances, no new license shall be issued for at least 60 days after conviction, and the commission has the power to withhold it even then.

Lost License Pads May be Replaced.

Under a ruling made last week by J. B. R. Smith, Commissioner of Motor Vehicles for New Jersey, a motorist may obtain duplicate official license pads for his machine in case the originals are lost, by making affidavit to that effect. The price will be 75 cents for a single pad, or $1.50 for a set of two.

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To Sum Up—

Solar Motor Lamps are superior to those of other manufacture for the following reasons:

(1) The internal method of screw assembling insures a perfectly smooth exterior. (2) All parts are interchangeable. (3) They have fewer parts. (4) Are more simple in construction. (5) Less solder is used. (6) The brass has more "body"—they are heavier and more durable. (7) They are better in design. (8) Special B & L Solar short focus Mangin Mirrors are used and each lamp is tested for accuracy of focus. The highest efficiency as regards lighting is assured.

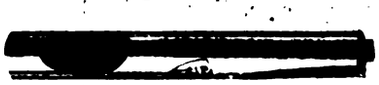
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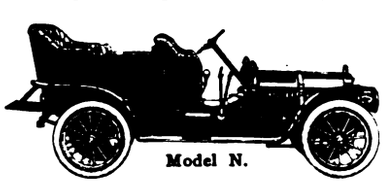
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Price of Horn, only . . . $5.00
Price of Outfit, complete . . 8.00

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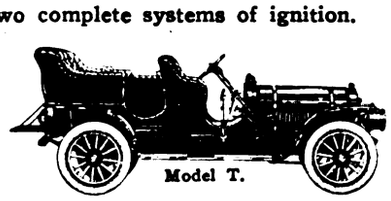
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The Week's Patents.

884,562. Tire Construction. Frederick A. Bragg, Springfield, Mass., assignor, by direct and mesne asignments, of one half to Daniel J. Brown, Springfield, Mass. Filed Sept. 10, 1906. Serial No. 333,975.

1. In a tire construction, a series of layers composing the tread portion, said layers including a rubber core and quilted by threads saturated with a rubber solution.

884,731. Electric Igniting Device. Roy E. Hardy, New York, N. Y. Filed Dec. 18, 1905. Serial No. 292,178.

1. In an electric igniting device the combination of an induction coil, a casing of non-conducting material inclosing said coil and projecting at one end beyond the same, exterior binding screws carried by the casing in electrical connection with the terminals of the primary of the coil, a sparking plug having an exterior metallic shell forming one electrode, a second electrode insulated therein, a flanged head integral with the shell detachably engaging and closing the projecting end of the casing and forming an air space between it and the induction coil, and electrical connections connecting the exterior shell and the insulated electrode with the terminals of the secondary within the air space in the casing.

884,752. Center Drive Axle and Wheel. John McGeorge and Harold McGeorge, Cleveland, Ohio. Filed March 5, 1907. Serial No. 360,703.

1. In a driving mechanism for vehicles, the combination of a pair of wheels, a driving shaft, and clutch mechanism interposed between the driving shaft and each wheel shaft, substantially as specified.

884,794. Protecting Casing for Tires. Lorwin N. Cates, St. Louis, Mo. Filed June 15, 1907. Serial No. 379,188.

A tire casing composed of series of pairs of sections hinged together along the outer edge or tread of the wheel, tongues projecting from the sections on opposite sides of the hinge-line, and sockets formed in the contiguous sections for receiving said tongues and thus interlocking with the sections carrying said tongues, substantially as set forth.

884,846. Gasolene Turbine Motor. James F. Orebaugh and Charles W. Connett, Madison, Ind.; said Connett assignor to said Orebaugh. Filed May 25, 1907. Serial No. 375,675.

1. In a motor, the combination of a casing, a partition secured to said casing, a series of explosion chambers fixed to said casing, compressing plungers mounted to reciprocate in the explosion chambers, a spring seated piston head mounted in the explosion chambers, means for moving the plungers inward to compress the charge, a shaft mounted in the casing, and a series of bucketed rotors keyed to the shaft.

884,853. Internal Combustion Engine. Carlton R. Radcliff, New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J., a Corporation of South Dakota. Filed July 26, 1906. Serial No. 327,808.

1. In an internal combustion engine, the combination with a plurality of cylinders, of a gas receiving and compressing space in each cylinder and having an inlet and a port near the lower end thereof to allow exhaust of the products of combustion in case of back fire, a combustion chamber in each cylinder and having an exhaust, and a communicating passage between the gas receiving space of one cylinder and the combustion chamber of another cylinder.

884,882. Overland Steam Coach. Robert L. Woods, Nashville, Tenn., assignor of one-third to Solomon P. Harris, Nashville, Tenn. Filed March 1, 1906. Serial No. 303,712. Renewed Feb. 13, 1908. Serial No. 415,764.

1. The combination with a vehicle body, of the front and rear trucks, a plurality of sets of wheels pivotally mounted for rotation on the forward truck, and means connecting said wheels whereby the movement of one set of wheels will effect the movement of the other.

884,929. Radiator or Cooler for Motor Road Vehicles. Friedrich J. D. Hullinghorst, London, England. Filed June 24, 1907. Serial No. 380,579.

1. In radiators or coolers, for motor road vehicles having an air propelling fan said radiator being provided with an axis and a main annular chamber, in combination with means providing additional small and large annular chambers concentric with the axis of said fan, and disposed at the back and front of the radiators, with a series of tubes radiating from said small chambers, and connected at their outer ends with said large chambers, partitions dividing said large chambers into two compartments and communicating pipes or passages from the said main annular chamber, so that the water to be cooled is caused to flow from the upper compartments of said larger concentric chambers through the upper half of the series of radial tubes to the inner annular chambers, and thence through the lower half of the series of radial tubes into the lower compartments from which it flows into the base of the radiator and circulates about the main annular chamber, as set forth.

884,967. Shock Absorber for Vehicles. William C. Williamson, New York, N. Y. Filed May 10, 1907. Serial No. 372,890.

1. In a shock absorber, in combination, a case, a spring barrel, a spring plate, the edges whereof are supported in said case, and a member held against the body of said plate and transmitting the pressure thereof to said barrel.

885,014. Front Driven Motor Vehicle. Arthur W. Brightmore, Burford, Egham, England. Filed Sept. 27, 1906. Serial No. 336,458.

1. In a motor propelled vehicle of the type referred to, a segmental race and rack on the vehicle under frame, a slider engaging said race and pivoted on the fore-carriage at the "neutral" position, a pinion meshing with the rack and fixed on a spindle carried by the slider, a second spindle connected to the former by a universal joint, a worm wheel on the second spindle, a worm meshing therewith and means for driving the same, substantially as hereinbefore set forth.

885,059. Indicator for Tanks. Julius B. Laursen, Sorkness, N. D. Filed April 11, 1907. Serial No. 367,539.

1. In a device of the class described, a dial receiving member having a central bore terminating at one end in a recess, a rod having threaded extremities rotatably mounted in the bore, a pointer engaging one of the threaded ends of the rod and adapted to rotate in the recess of the member, a float, means co-operative with the latter and the opposite end of the rod to ac-

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tuate the same to move the pointer, a crystal mounted on said member above the recess therein, a detachable cap for securing the crystal in position on the member, and a removable stopper carried by the cap.

885,111. Steering Wheel Pivot and Pivot Bearing for Automobiles. Josef Vollmer, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 20, 1906. Serial No. 322,592.

1. The combination with a steering wheel pivot, of an axle fork having an upper bearing for the pivot, a removable lower bearing therefor which is divided to permit the removal of the pivot, and means for adjusting one of said bearings to secure a uniform distribution of the weight upon the bearings.

885,121. Puncture Telltale. Charles A. Winter, New York, N. Y. Filed Aug. 14, 1906. Serial No. 330,592.

1. In a puncture telltale, the combination of a pneumatic wheel tire, an electric circuit closing device comprising a contact carried by the wheel, a part connected with said contact and engaged by the tire, a contact mounted on a part stationary with reference to the wheel in the path of the wheel-carried contact, the tire when inflated acting on the part engaged thereby to keep the wheel-carried contact from touching the stationary contact, and means that moves the wheel-carried contact to cause its engagement with the stationary contact when the tire is deflated.

885,181. Automobile Buffer. James H. Sager, Rochester, N. Y. Filed Feb. 21, 1908. Serial No. 417,190.

1. In an automobile buffer, a horizontal buffer rod, lever means attached to said rod and pivoted to the frame of the automobile on an axis in a substantially vertical plane and projecting at an angle to said plane from the pivotal axis to the attachment thereof to said rod, a spring put under stress by movement of the lever around its pivot, and a spring support attached to said automobile and in convenient proximity to said lever.

885,249. Steering Gear for Automobiles. John C. Higdon, St. Louis, Mo. Filed Dec. 4, 1906. Serial No. 346,331.

1. A steering gear for motor vehicles, the front axles of which swivel horizontally, comprising a steering post, arranged for operation in the body of the vehicle, a pinion fixed on the lower end of the steering post, a chain engaging the teeth of the pinion, connections between the ends of the chain and the outer portions of the swiveled axles, and a chain retainer fixed to the vehicle frame and adapted to hold said chain on said pinion.

885,336. Tire Cushion for Vehicles. William E. Garvey, Cleveland, Ohio. Filed June 4, 1907. Serial No. 377,136.

1. A vehicle tire consisting of a rubber casing, a core of rope, and a winding thereon of a strand of yarn fitting and filling the rubber casing and forming a cushioning support therefor upon the rope core.

885,493. Horn. Howard W. Lester, Hartford, Conn., assignor to The Post & Lester Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 5, 1907. Serial No. 400,752.

1. A horn consisting of a tapered convolute body with the smaller end of the body at the periphery and the larger end of the body at the center, said larger end having an ovoid perforated head in the plane of the coils, substantially as specified.

885,505. Driving Gear for Automobiles. Henry G. McComb, Detroit, Mich. Filed Jan. 2, 1907. Serial No. 350,441.

1. In combination a power shaft, a plurality of gear wheels fixed thereto, a counter shaft, complementary gear wheels carried thereby and adapted to be thrown into and out of operative connection with said first mentioned gear wheels, a plurality of driving wheel mechanisms, each deriving their power therefrom independently of the other, and a second counter shaft axially in line with the power shaft and adapted to be thrown into clutching engagement therewith to receive from it the power ordinarily transmitted to the first named counter shaft, substantially as described.

885,647. Pneumatic Vehicle Tire. Mary B. Priest, Milwaukee, Wis., assignor to The Priest Tire Company, a Corporation of Wisconsin. Filed May 20, 1907. Serial No. 374,567.

In a pneumatic vehicle tire comprising a one piece tubular casing, having flexible side walls, a flattened split base, and an outer flat tread extension; the combination of a metallic band fitted to the flat tread extension, a pliable annular shoe fitted over the band, metallic clamping rings fitted to the sides of the shoe and said flat tread extension, and securing bolts connecting the rings.

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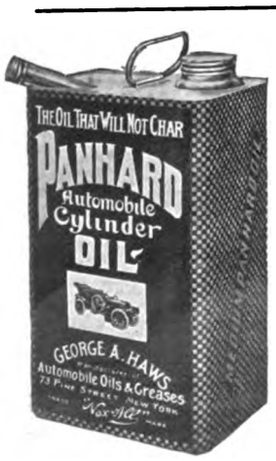
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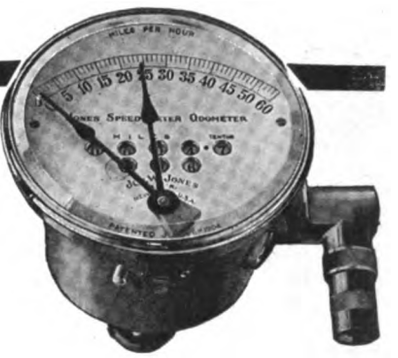
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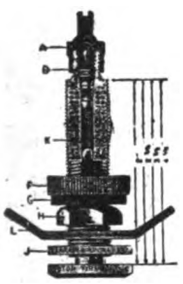
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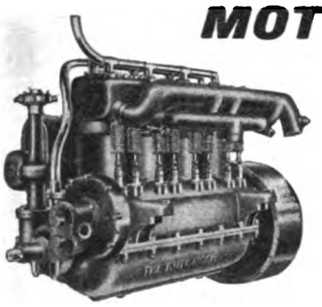
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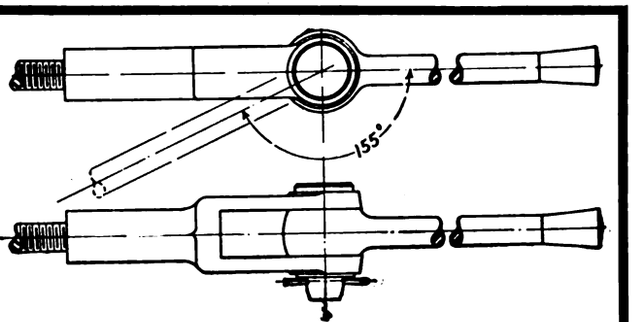
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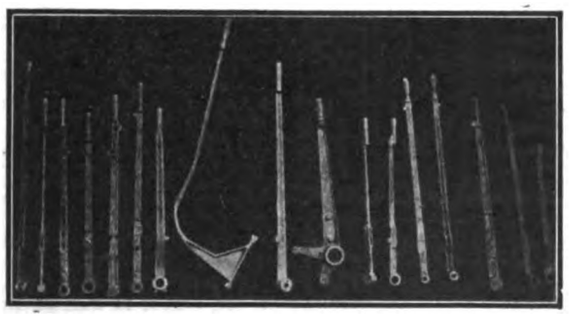
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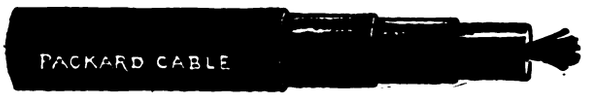


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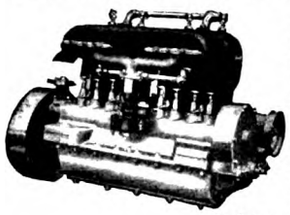
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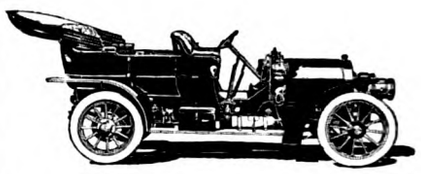
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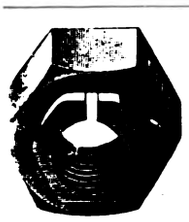
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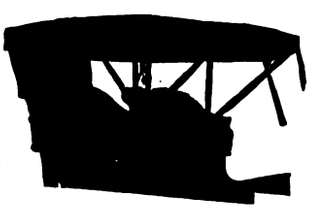
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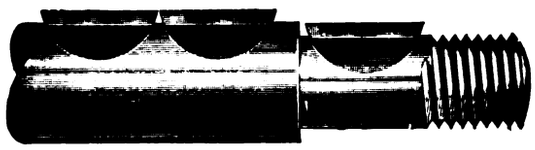
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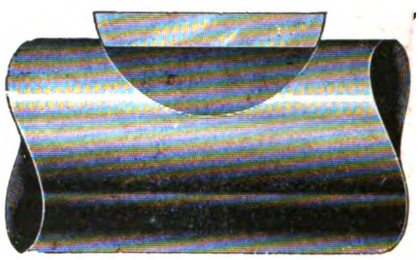
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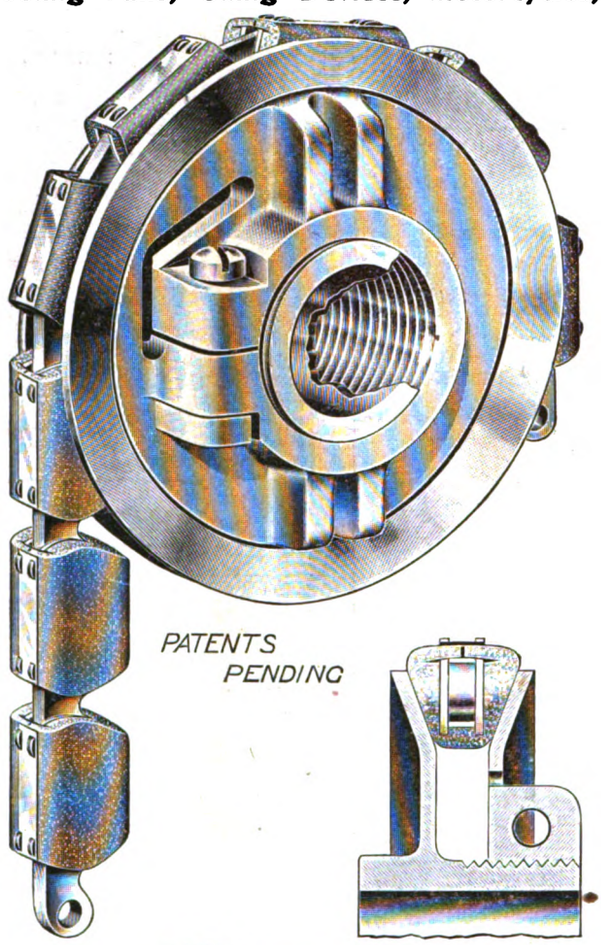
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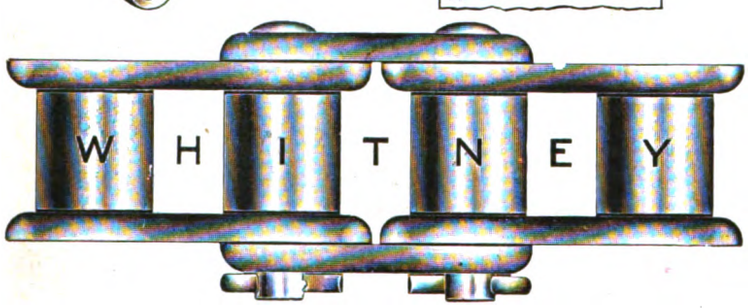
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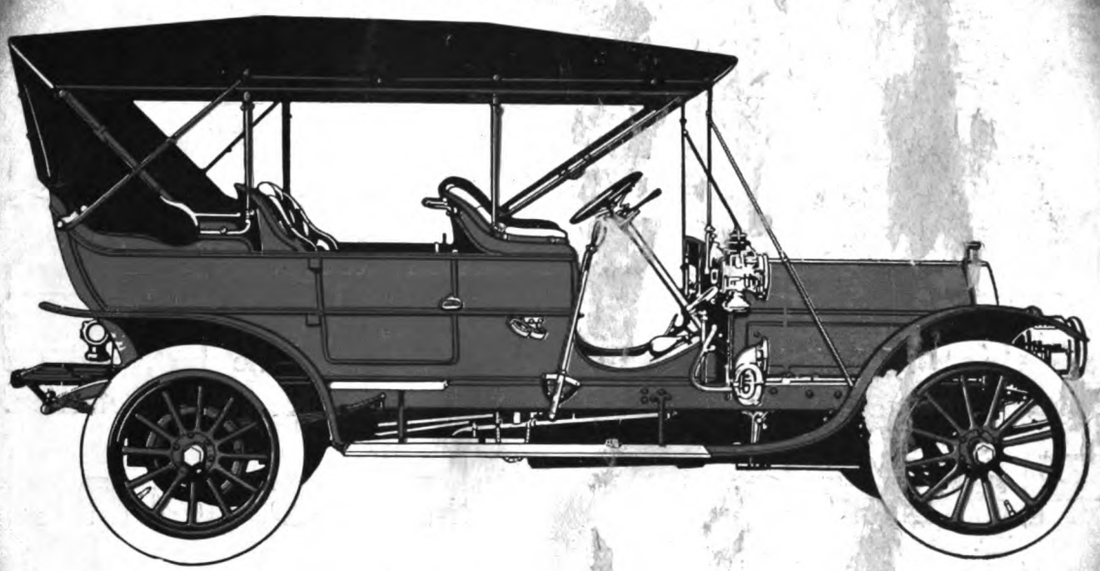
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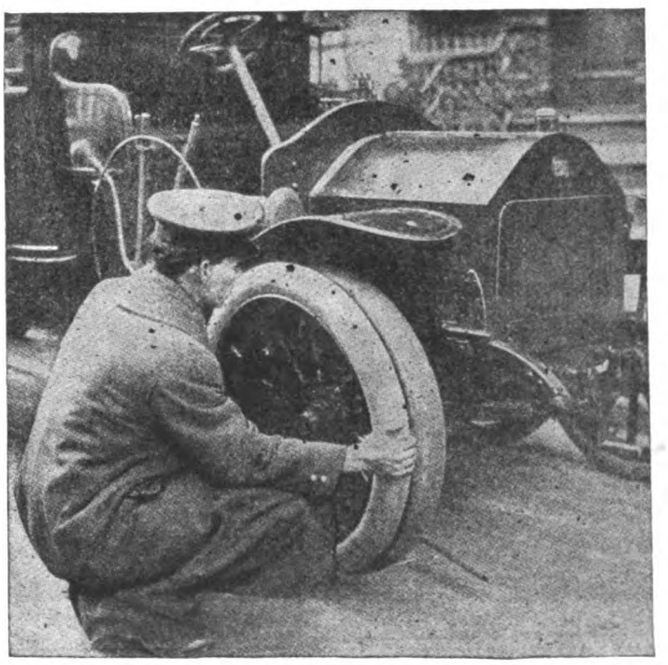
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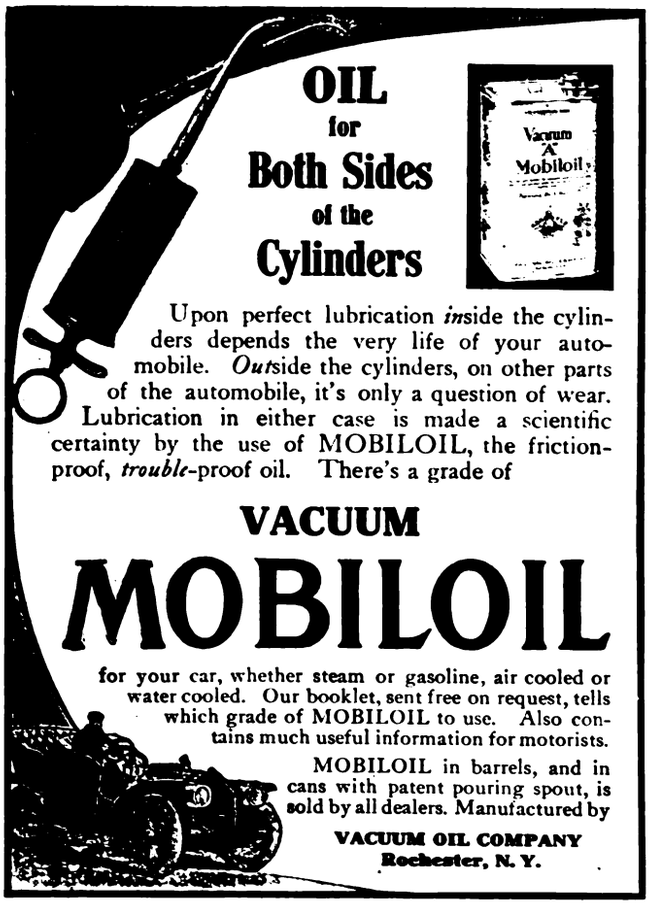
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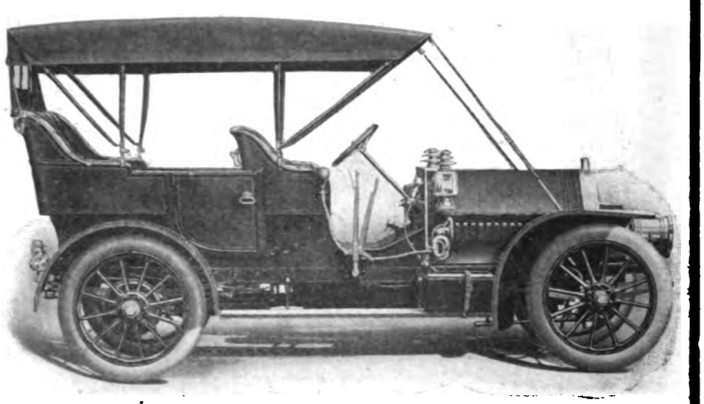
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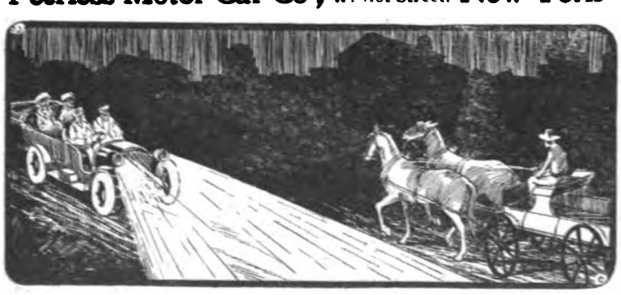
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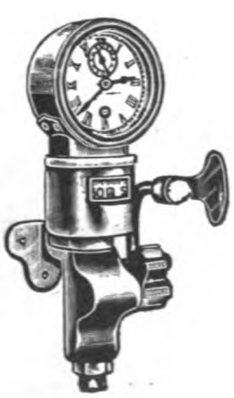
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THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller	$1.00 per foot.
1 x ⅝ x ⅝ roller	1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



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Empire Tires
WEAR LONGEST

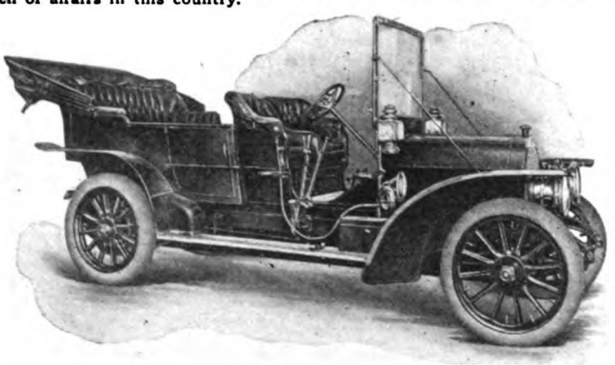
EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

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ONE YEAR GUARANTY

Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



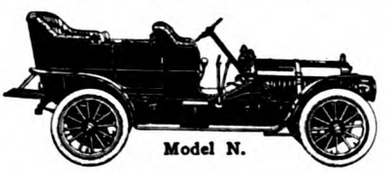
DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

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afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.


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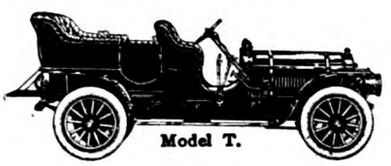
Model K—4 cyl., 4⅞ x 5
$3,500

Model N—4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

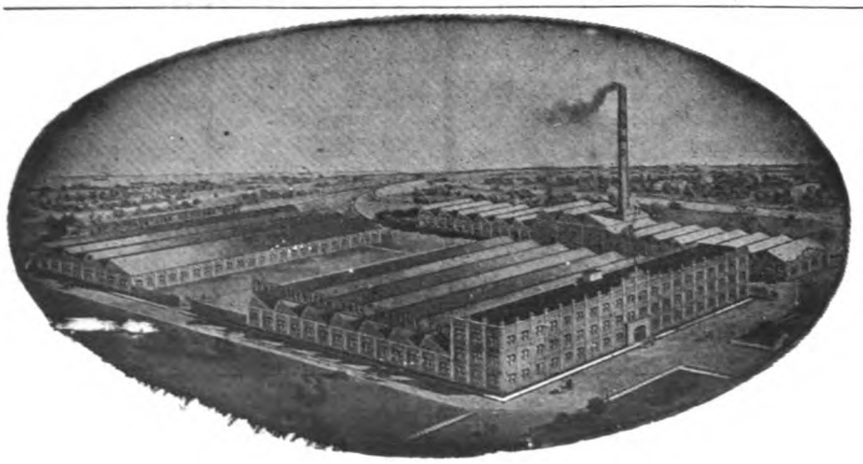
Model R - 6 cyl., 4½ x 4¾
$4,200

Model T—6 cyl., 5 x 5
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Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.
1007 E. 22d Street INDIANAPOLIS, IND.



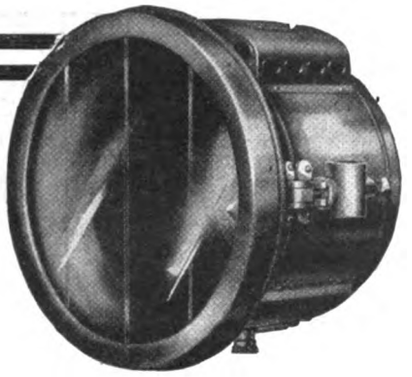
The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of al. competition combined.

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To Sum Up—

Solar Motor Lamps are superior to those of other manufacture for the following reasons:

(1) The internal method of screw assembling insures a perfectly smooth exterior. (2) All parts are interchangeable. (3) They have fewer parts. (4) Are more simple in construction. (5) Less solder is used. (6) The brass has more "body"—they are heavier and more durable. (7) They are better in design. (8) Special B & L Solar short focus Mangin Mirrors are used and each lamp is tested for accuracy of focus. The highest efficiency as regards lighting is assured.

No detail is overlooked in the construction of Solar Lamps. The Solar Nameplate is a positive guarantee to the user that he has the best in lighting equipment.

Write for a copy of our 1908 catalog.

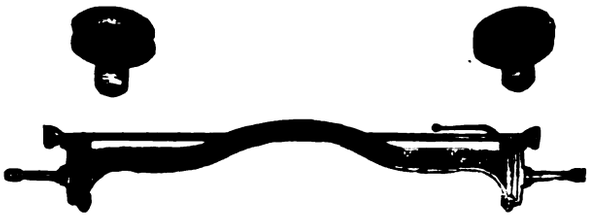
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Solar Lamps-"SHOW THE WAY"

YOU ARE NOT EXPERIMENTING

when you buy

"LONG-ARM" FRONT AXLES



An up-to-date line, correct design, good material, careful workmanship.

Weldless I-beam with spring pads forged integral for the heavier types, now in use on prominent American cars.

Also lighter I-beam and tubular Axles.

You have a choice in bearing equipment too.

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The tire that proved
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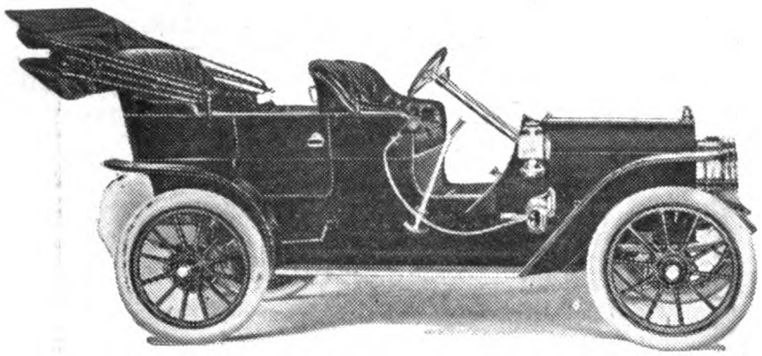
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Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

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J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

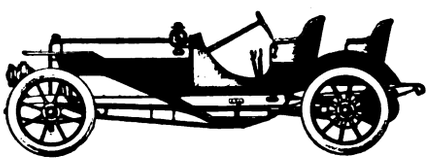
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No. 18 **Palmer-Singer Six-Fifty, Racing Car 6 Cylinder, 60 H. P. $2,450**

Palmer-Singer Four-Thirty Skimabout 4 Cylinder, 28-30 H. P. $1,950

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Palmer-Singer Town and Country Car 28-30 H. P. $3,000

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The Sixty-Six is a touring runabout capable of record-breaking speed and still of carrying three or more passengers with perfect comfort on long and hard runs. It will far outdistance and outwear any car of its class at even $2,000 more in price.

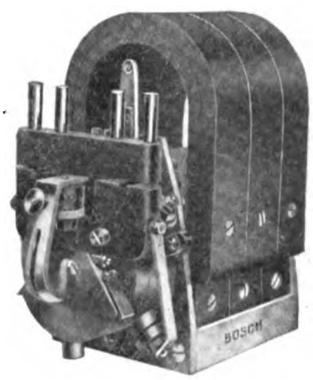
Metropolitan Distributors the SELDEN

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NAZZARO, driving a 175 "horse" Fiat on the Brooklands Automobile Track, London, England, traveled two and three-quarters miles at the rate of 120 miles an hour. This is without question the most wonderful speed demonstration known to the world.

Perfect ignition was largely responsible for the placing of this new record. Naturally the BOSCH MAGNETO was used. The better class of motor cars all over the world are equipped with the Bosch System of Ignition.

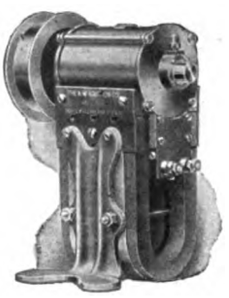
BOSCH MAGNETO COMPANY

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THE K-W MAGNETO

Model F

Has bracket as shown for attaching to frame of car. Made especially



For Ford Runabouts

Good on any car.

High in Quality—Low in Cost
Perfectly Reliable—Easy to Apply
More Power—Less Fuel

Price $35.00

It starts the engine easily without batteries and runs it faster and better than any battery because it gives a hotter spark. They run in ball bearings and have no moving wires or brushes to give trouble and wear out. They are made to **last** and **they do last.** They are the **cheapest** that is **good** and there is **nothing better** at any price.

We also make high grade Coils and Plugs and the K-W Master Vibrator. Get our catalogue.

THE K-W IGNITION COMPANY

38 Power Avenue, CLEVELAND, OHIO

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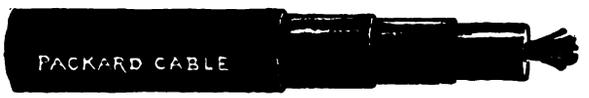
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Is Always of One Quality, THE BEST



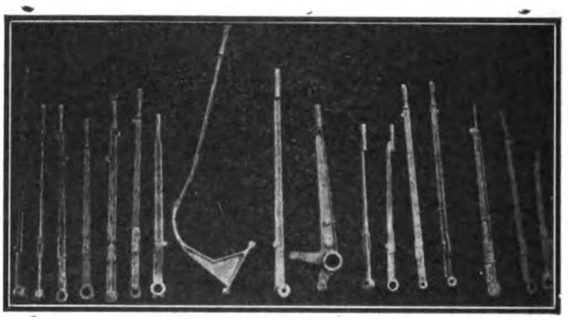
If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF.
Samples and Prices on Request.

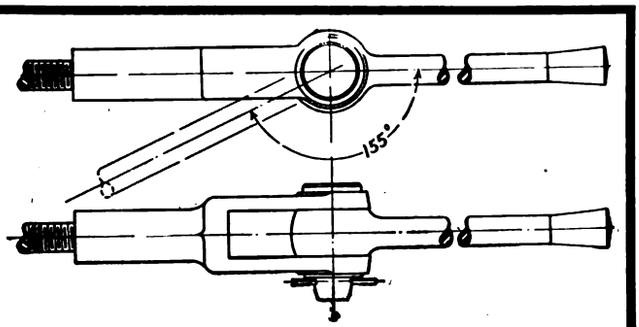
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THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.

A. L. A. M.



We now have in stock the new A. L. A. M. Standard Rod and Yoke Ends, both the adjustable and plain patterns, either blanks or milled. Send for new circular with full particulars.

THE BILLINGS & SPENCER CO., Hartford, Conn.

Supplementary Spiral Springs

Provide SPRING INSURANCE and SPRING COMFORT.

Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

Let us send you our interesting booklet, and ask your dealer about them.

SUPPLEMENTARY SPIRAL SPRING CO.,
4555 Delmar Avenue, St. Louis, Mo.
New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.



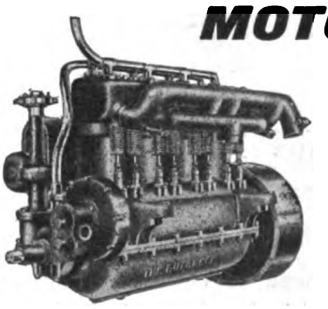
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MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

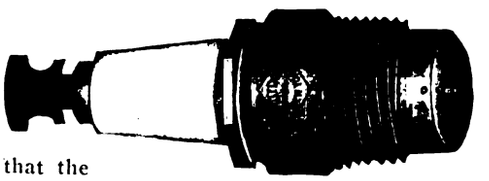
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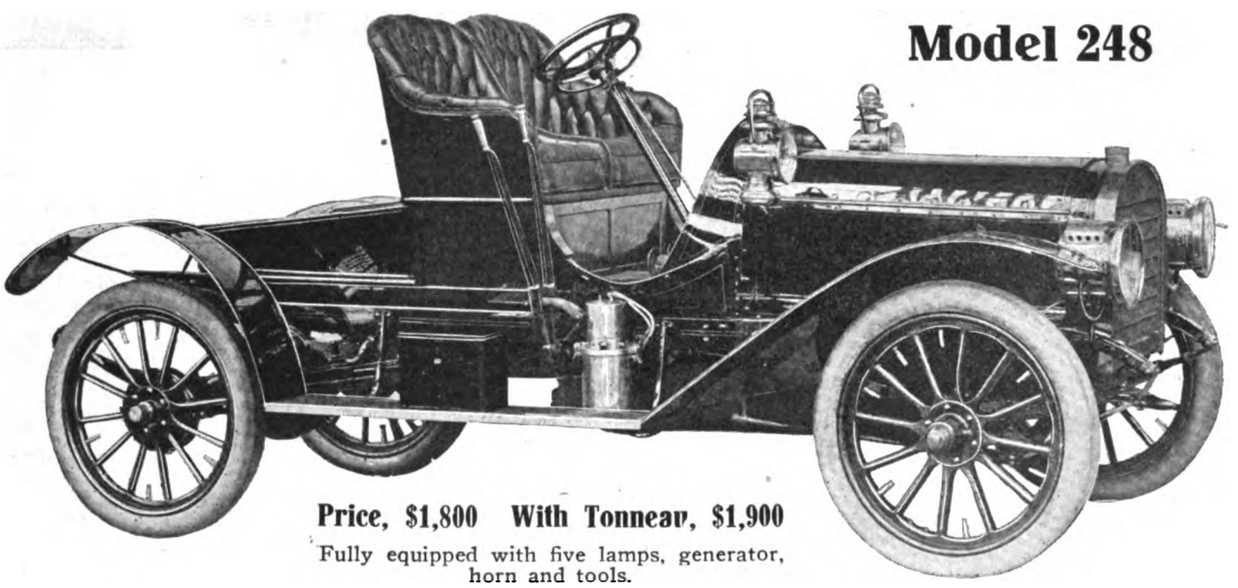
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is a mighty good Plug; use one in your engine. You will find it gives better ignition than any other Plug. **Price, $1.25.**

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Rambler



Model 248

Price, $1,800 With Tonneau, $1,900

Fully equipped with five lamps, generator, horn and tools.

Here is an Unusual Car!

FOUR cylinders; full 30 horsepower; adjustable roller bearing transmission; transmission gears made of special steel that will neither mar nor chip; floating type rear axle; elliptic rear springs.

With tonneau, a complete touring car; full size; five passenger capacity; 108-inch wheel base; 34-inch wheels and 4-inch tires.

Quiet, powerful, flexible and handsome.

Tested by three seasons' continuous service and perfected by the knowledge gained twelve thousand Ramblers in daily use.

Where else can you obtain similar value—size, power, efficiency, reliability, appearance nfort?

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, June 25, 1908. No. 13

SECOND SHOW IS IN ABEYANCE

Arrangements Practically Settled, but Final Action Awaits Miles's Return—Manager Reeves Falls Ill.

On his return from a western visit last week, Alfred Reeves, general manager of the American Motor Car Manufacturers' Association, reported that arrangements for the organization's show in Chicago next winter had been "practically settled," which would indicate that Chicago has small prospect of escaping the two-shows situation that has afflicted New York during the past several years.

Reeves stated that according to present plans the show will be housed in the Exposition Building, Forty-third and Halstead streets, which affords 146,000 square feet of space—more than twice as much as is afforded by any other building in either Chicago or New York. It was added that the Association's show committee would go to Chicago early next month to complete the final arrangements; but a statement issued the next day suggests that the second show is not a certainty, by any means, and that nothing further will be done until the return from abroad of S. A. Miles, manager of the established show in the Chicago Coliseum, in which the licensed and the unlicensed manufacturers have dwelt in peace for one week of each of several years.

Miles is expected to arrive almost any day and it may prove that the "second show movement" is but an adroit bit of cleverly planned strategy. Information on the point is, however, not obtainable, as the day after issuing his last statement Reeves was stricken with appendicitis, and to the distress of his many friends, he was forced to undergo an operation. At last accounts, however, he was doing well, and with every prospect of an early recovery.

During his western trip Reeves visited a number of factories and reported that almost without an exception they are operating full time, and that work on the 1909 models is well advanced.

Fire Destroys Shelby Tube Plant.

The plant of the Shelby Steel Tube Co. at Shelby, Ohio, which was the property of the National Tube Co., which in turn is owned by the United States Steel Corporation, was totally destroyed by fire on Thursday night last, 18th inst. As the plant had been shut down for several months, the cause of the fire is a mystery. The flames spread so rapidly that they had consumed the property before the engines summoned from neighboring towns arrived. The loss is estimated to be $2,000,000.

Court Extends Pope-Toledo Time.

Judge Robert W. Taylor, of the United States Circuit Court for the Ohio district, extended the time for filing creditors' claims against the Pope Motor Car Co. to July 15th, when Irving Belford, as special master, will consider the eligibility of the claimants for sharing in the settlement of the company's affairs. Claims aggregating $300,000 already have been filed with the special master.

Alexander to Compete with Elyea.

W. D. Alexander, formerly of the Alexander-Elyea Co., Atlanta, Ga., who took over the firm's Jacksonville (Fla.) branch when he and Alexander recently parted company, is preparing to establish a jobbing house of his own in Atlanta in competition with his former partner. Alexander is at present in New York purchasing stock. Elyea, it will be recalled, is now doing business as the Elyea-Austell Co.

Thomas-Detroit is Now Chalmers-Detroit.

The title of the E. R. Thomas Detroit Co. has been changed to Chalmers-Detroit Motor Co., taking its name from its new president. The style of the company's newest product, a four cylinder, 24 horsepower car, listing at $1,500, similarly will be known as the Chalmers-Detroit.

LAMP MANUFACTURERS TO CONFER

To Get Together in Detroit To-morrow to Correct Abuses—Jobbers' Status Likely to be Defined.

Following the M. A. M. policy of promoting better understanding and to correct the far reaching abuses that have sprung from fictitious list prices and discounts, the lamp manufacturers who are contained within the membership of the Motor and Accessory Manufacturers, Inc., will hold a conference to-morrow at Hotel Pontchartrain, Detroit.

The attitude of the lamp makers respecting discounts differs, however, from that of the M. A. M. tire producing group who were first to engage in such a conference. The lamp men are in favor of increasing the dealer's discount and decreasing that of the jobber, and of more specifically defining the status of the latter. One prominent lamp manufacturer is known to be in favor of allowing the jobber but 10 per cent. more than is given the dealer, the jobbing discount to apply only to those houses that issue a catalog in which is actually listed the goods on which the discount is named. In other words, no catalog, no discount. According to this manufacturer's views, jobbers should be required not to sell at less than dealers' prices. These opinions, of course, reflect the ideas of but one man. What the Detroit conference will do in the matter remains to be seen.

Nally to Manage Lockport's Branch.

C. F. U. Kelly, president of the new Lockport Rubber Co., announced last week that D. B. Nally, the New York representative of the Continental Rubber Works, will join the Lockport company's staff on September 1st next. Nally, who is a big, genial soul with a knack of making friends, will have charge of the branch which the Lockport Rubber Co. will shortly establish in New York City.

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In the Retail World.

The Austin Automobile Co. has opened a branch at 1420 Michigan avenue, Chicago. It is in charge of George L. Adams.

The Oldsmobile Co., Spokane, Wash., has leased the premises 107-109 East Sprague avenue, which will be used as a sales room and garage. It is a brick building, 40 by 75 feet.

E. W. Bender has under construction on West Seventh street, Los Angeles, Cal., a modern fireproof garage and repair shop. It is near his present location between Alarado and Lake streets.

W. L. Loos, who for several years has been manager for John T. Bill & Co., at Los Angeles, Cal., is to open an establishment of his own at Oakland. He will handle the Reo cars and the R-S motorcycles.

I. R. Campbell, president of the Campbell Auto Co., which has garages at Albia and Fort Dodge, Ia., has opened one of the most complete automobile establishments in Des Moines, at 309-311 East Walnut street. He will handle Rambler cars.

Burlington, Ia., congratulates itself upon the establishment of the Burlington Auto and Supply Co., which has opened a garage at 309 Front street, to hire out automobiles, deal in supplies and do automobile repairing. Warren Beckwith is manager.

Franklin Martin and T. G. Conway, Jr., of South Orange, N. J., have formed a copartnership to conduct the Marco Garage in that town. They purpose incorporating as a company. Plans have been approved for a one-story garage, 50x150 feet, at 62 South Orange avenue. It will be built of concrete blocks.

Colonel F. C. Fenner has bought the interest of C. A. Hawkins, of San Francisco, in the White Garage at Los Angeles, Cal., and has become president of the company, which takes over the White agency in that part of the country. Captain H. D. Ryus remains in charge and holds the position of vice-president and manager. The two officers, with C. W. Ryus and Henry Bixby, are trustees.

Nicholas Bechtel, of Cambridge, Mass., has been trying ever since 1906 to get permission from the city authorities to build and maintain a public garage on Harvard street, near Dana, in that portion of the city known as Dana Hill. The aldermen voted down the proposition each year until the present, when they voted, 6 to 5, in favor of granting the privilege. And now Mayor Wardwell interposes a veto.

The Week's Incorporations.

Worcester, Mass.—Macker-Tyler Co., under Massachusetts laws, with $1,000 capital; to deal in automobiles. Corporators—Melvin A. Macker, Oliver P. Tyler, Frederic T. Sanford.

Niagara Falls, N. Y.—Frontenac Garage Co., under New York laws, with $10,000 capital; to deal in and repair automobiles. Corporators—Eugene Cary, Elmer H. Porter, Daniel Burtch, Niagara Falls, N. Y.

Halfmoon, N. Y.—Automobile Co-operative Association of America, The, under New York laws, with $40,000 capital; to manufacture automobiles and motor boats. Corporators—F. B. Roues, Rutherford, N. J.; William C. Dickerman, and H. H. Williams, New York City.

Dale Reports Good Business Outlook.

According to C. H. Dale, president of the Rubber Goods Mfg. Co., which includes the Hartford, G & J, and Morgan & Wright plants, there has been a sharp improvement in business during the past few weeks, and the outlook is very encouraging. The tire output is larger than it was last year and the only department that shows a large falling off is that furnishing supplies to the railroads. The company's railroad business has a value of $3,000,000 to $4,000,000.

"Our business is satisfactory, a decided improvement having taken place in the first weeks of June," says Mr. Dale. "Collections are coming in freely; last week they amounted to about $1,500,000. In fact money has become almost a glut.

"In view of the cheapness of money I anticipate a marked improvement in general conditions soon. I expect that in August we will see a considerable revival which will be due to the wealth of the country rather than to the probable outcome of the presidential election. The latter of course will have its effect in so far as it is reassuring or not.

"All the plants of the Rubber Goods company are being operated, though not to the limit of last year. I consider the conditions prevailing then as abnormal, however, and in contrast this year's production would be about normal."

Meteor "Unveils" Its First Product.

The first of the new Meteor four-cylinder cars, the product of the Meteor Motor Car Co., Bettendorf, Iowa, was "unveiled" last week by Ehlers & Duerr, the Davenport (Ia.) agents of the company. The "unveiling" was made quite an event and excited a lot of interest.

Hyde Returns from Visit to Europe.

Arthur H. Hyde, general manager of the Whitlock Coil Pipe Co., Hartford, Conn., returned from Europe this week. He was absent two months during which he combined some business with more pleasure.

Page Begins to Build Runabouts.

The recently incorporated Page Motor Vehicle Co. has commenced operations at its plant, 288 Dyer street, Providence, R. I. It will build a 20 horsepower, four-cylinder runabout.

Blackman Leaves Parish & Bingham.

Charles W. Blackman has resigned as sales manager of the Parish & Bingham Co., Cleveland.

Olds Increasing Facilities.

At present there are more men employed at the Olds Motor Works, at Lansing, Mich., than ever before. According to an authorized statement, there are exactly 375 more men at work than were engaged at the busiest period of 1907, and the number of orders is greater than at any time since the days of the single cylinder runabout.

Several improvements of importance are being made at the factory. One of these is the planking of the half mile track. This track is used for testing purposes and is to be covered with 16-foot plank, two inches thick. Work is now well under way on this track and when it is completed the Olds Motor Works will have as fine a testing track as there is in the country. Inside the track a base ball diamond has been prepared for the use of the men both in the shop and offices. Several additions are now under way, the largest of these being a new central storehouse. This building, which is now nearly completed, is ninety by one hundred and fifty feet in dimension and is two stories high. Other improvements too, are being pushed rapidly so that there is no delay on 1909 models and the facilities for handling this work are greater than ever before.

British Trade Shows Continued Decline.

British imports of cars and parts continue to decline. The aggregate importation for the month of May was $84,605 less than for May, 1907. But 340 cars were imported, of a total value of $605,640, while the 289 chassis imported were valued at $531,400. The total value of parts was $751,430. The combined total for the month was thus $1,888,470. A drop in exports also was observable during the month. The 144 cars exported were valued together at $279,350, while 15 chassis were shipped out of the country, with a combined valuation of $25,735. Together with the $127,550 worth of parts, the total thus amounts to $432,635. The total exportation for May, 1907, was $457,905.

Rajah Removes Office to Bloomfield.

On July 1st the Rajah Auto-Supply Co. will remove its office from New York City to Bloomfield, N. J., where the factory is located. The facilities of the plant recently have been considerably enlarged, which will permit of an increased output of the Rajah spark plugs and other specialties.

Brinegar on Annual Eastern Visit.

E. P. Brinegar, of the Pioneer Automobile Co., San Francisco, Pacific Coast agents for the Oldsmobile and Thomas cars, is now in the East. It is in the nature of his annual visit.

Jeffery Starts on Foreign Pleasure Trip.

Thomas B. Jeffery sailed yesterday for an extended trip abroad. Pleasure is the chief purpose of his visit.

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APPERSON ADDS A NEW MODEL

Features of Popular Priced Car in Touring or Runabout Form—Increase of Facilities Announced.

Two noteworthy features are embodied in the annual announcement of the Apperson Bros. Automobile Co., both of which are significant of changing times and growing confidence in the strength of the industry. One involves the introduction of "Model O," which is a brand new car, of Apperson build throughout, and listing at $2,250 with 3 or 4 passenger body, or $2,400 with 5 passenger touring body. The other statement is to the effect that the manufacturing facilities of the Kokomo factory have been increased to an extent which will make possible an output during the coming year of no less than 1,000 cars.

Model O is a four cylinder machine rated at 30.4 horsepower by the A. L. A. M. formula and built with individually cast cylinders having valves oppositely placed and actuated from cam shafts enclosed within the crank case. The lifters are adjustable for wear and lost motion and the crank case is so arranged that both cam shafts may be withdrawn without disturbing the remainder of the motor. Ignition is by jump spark with storage batteries as the source of primary current, although the high tension magneto equipment will be supplied extra. The carburetter is of original design, and has been used by the makers for a number of years.

Transmission is by contracting band clutch and three speed, selective type change gear, a feature of the device being the construction of the gear box, which is built in the form of a solid casting, so arranged that the gears and shafting may be withdrawn without removing a single bolt or nut except those retaining the cover. A further point in its favor is that there are no bolts or nuts inside the case and nothing to work out of adjustment. Needless to say, all bearings are of the ball type. They are noteworthy in that they are of the latest New Departure pattern, however, that is to say, that two rows of balls are employed in each bearing instead of one. The propeller shaft is designed for straight line transmission under normal load.

The more general specifications of the machine include the wheel base, 119 inches; wheels and tires, 34 by 4 inches; springs, semi-elliptical, 40 by 50 inches long, front and rear; clearance, 10½ to 11 inches under the axles; and brakes, double, internal-external, mounted on the rear wheels. The front axle is drop forged and carries ball mounted steering pivots. The rear axle is of the floating type and is cambred sufficiently so that the rear wheels stand on a "plumb spoke."

In addition to the new model, the Apperson output for the coming year will also include these models which have been built heretofore: "Jack Rabbit;" Model E, 50-55 horsepower, in touring car and 5 passenger runabout styles; Model I, 40-45 horsepower touring car; Model M, 35-40 horsepower, with 3, 4 or 5 passenger bodies; and the 50-55 horsepower 6 cylinder touring car, with 7 passenger body.

Receiver Named for a "Wonder Worker."

On the petition of William Spencer, Charles E. Oelschlager and Frank Kegrize, John L. Burns has been appointed receiver in this jurisdiction for the chemically named CO2 Development Co., of Philadelphia. The defendant concern, together with John E. Carroll, the principal stockholder, was sued for an accounting to all stockholders and for an explanation of the management and development of an invention of Carroll's. The invention related to the use of carbonic acid gas for the generation of motive power for the operation of machinery and vehicles of all descriptions, particularly automobiles and railway cars.

It is charged that Carroll dominated the business of the company, the election of the board of directors and generally ran things to suit himself. It is also charged that while he has maintained a demonstrating apparatus in the company's Philadelphia office, he has repeatedly refused to give proper demonstrations of the value of the invention to proposed investors, and has repeatedly used profane, abusive and offensive language to proposed investors, and as a result of his conduct the company has been attacked by publications in technical, trade and other journals as a fraud and swindle and has been greatly damaged in its reputation and business. Carroll is also charged with having refused to develop the invention or to proceed with any plans for its application to vehicles and machinery.

Chicago Dealers Ask for a Speedway.

The Chicago dealers certainly are not backward in asking for what they want. In a communication to Mayor Busse of that city, Henry Paulman, representing the Chicago Automobile Trade Association, has asked for an automobile speedway on the South Side of that city. In his letter Paulman urges that a street one mile long be designated for the use of the association so that demonstrators of automobiles may show prospective purchasers the power and speed of cars without danger of conflict with the city speed laws. The mayor referred the communication to Commissioner of Streets Hanberg.

Reo Declares a 40 Per Cent Dividend.

The Reo Motor Car Co., Lansing, Mich., has declared another cash dividend of 40 per cent. This is the second dividend of the year, the first of 20 per cent. having been paid on April 18, and makes a total of $600,000 paid in dividends so far this year on a capital stock of $1,000,000.

PACKARD "THIRTY" FOR 1909

Small Differences Between Latest Model and Its Predecessors—Some Minor Refinements and Their Effects.

As has been the case during the last few years, the Packard Motor Car Co., has made only slight alterations in the design in present use in producing the 1909 model, Packard "Thirty," announcement of which was made last week. With one or two exceptions, the differences between the latest model and its predecessors are not readily observable, but comprise a number of minor refinements such as may be appreciated by those who are intimately acquainted with the machine.

Of the visible indications of this refining process, the most noticeable is the elimination of the small reverse lever, which formerly was employed, in favor of an improved form of single shifting lever, which, though progressively actuated in obtaining the forward speeds, is moved inward in obtaining the reverse. Another new and visible feature is a brace which extends between the two headlight brackets, for purposes of reinforcement. The headlights included in the regular equipment this year, are of Solar make, it should be mentioned incidentally. Still another new feature is the use of a honeycomb radiator instead of the ribbed tubular type employed in the 1908 cars.

Improvements pertaining directly to the motor, include the elimination of the idler gears in the two-to-one mechanism, as a result of which the element of noise is reduced, as well as the number of parts in motion. A centrifugal water pump now is used, instead of the gear pump, while a special feature of its construction is the hydraulic pressure lubricated, thrust bearing. The crank shaft also has been changed in design at its forward end in such a way that there is no unprotected end protruding from the forward part of the case.

As for the running gear, a partial redesign of the steering mechanism has resulted in the placing of the rod connecting the arm at the base of the steering column and the knuckles, over, instead of under, the axle as formerly, thus minimizing the jar upon the hands of the driver. It also is to be observed that roller bearings are now employed in mounting the front wheels. Added to this, a new and improved form of lining is employed in the brake shoes, which is more durable than any yet employed, while a change in the gear reduction from the motor to the ground, makes the latest type operate in the same ratio as was employed in the 1907 type.

The body design remains much the same as heretofore, except where a minor improvement has suggested itself as a result of careful observation.

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WHITE WINS

A Partial Summary of Victories, May, 1907-May, 1908

Perfect Score in Harrisburg Endurance Run

Tieing with three other cars in the contest of May 5th-6th, 1907. For the result of the "run-off," see below.

Fastest Time in Wilkes-Barre Hill-Climb

Defeating 45 high-powered gasolene cars, in the great contest on Decoration Day, 1907.

Fastest Time in Cleveland Hill-Climb

Defeating 40 high-powered gasoline cars.

Fastest Time in California Hill-Climb

Defeating the fastest of its gasoline competitors by nearly two minutes on the 2⅞ mile hill at Witter.

Perfect Scores in Sealed Bonnet Contest

Both White cars entered made perfect scores in this contest conducted by the Automobile Club of America.

Officially Observed Non-stop Run of 1871 Miles

Held under the auspices of the Royal Automobile Club of England and certified by that organization.

Fastest Time of the Season on the Track

One mile in 1:02, ten miles in 12:54, and twenty-five miles in 29:07 at the Santa Rosa Track Meet.

Officially Declared Most Efficient Car

In the South Harting hill-climb, conducted by the Royal Automobile Club, the White won the contest because it developed at the rear wheels a greater percentage of its assigned horsepower than did any other car. The rating assigned to the White was 50 horsepower.

Wins English Dust Trials

Proving officially that it raises less dust than any other car.

Clean Sweep in the Glidden Tour

Three White entries make three perfect scores.

Won Hower Trophy

The single White runabout entered in the Glidden Tour defeated a dozen high-priced gasoline runabouts competing for this prize.

Won California Reliability Contest

In the original contest held September 20th, two Whites tied with two gasoline cars. In the "run-off" held November 15th and 16th, both Whites made perfect scores, while both gasoline cars were penalized.

Won Quaker City Endurance Run

In this contest, held January 1st, 2d and 5th, the White vanquished 27 gasoline cars of 23 leading makes, winning the MacDonald & Campbell trophy.

Fastest Time in San Francisco Hill-Climb

Winning the free-for-all, the $2,500 class and the $3,500 class.

Fastest Time in the New York Carnival Hill-Climb

Making the ascent of Fort George hill in 32⅕ seconds, compared with the best gasoline time of 36 seconds; largest entry list of any hill-climb ever held.

New San Francisco-Los Angeles Record

The White car made the 478-mile mountainous journey in 17 hours and 17 minutes, cutting 56 minutes from the previous figures.

Double Victory in Harrisburg Endurance Run

The single White entry was the only touring car to make a perfect score, winning the principal 1908 trophy, the Board of Trade Cup, and also the 1907 prize in a "run-off" with last year's other perfect-score drivers.

Perfect Score in Detroit Endurance Run

Perfect Score in Baltimore Sealed Mechanism Contest

Two Perfect Scores in Kansas City Reliability Run

WRITE FOR LITERATURE

THE WHITE COMPANY, Cleveland, Ohio

NEW YORK CITY, Broadway at 62d St.
SAN FRANCISCO, 1460 Market St.
PHILADELPHIA, 629-33 N. Broad St.
BOSTON, 320 Newbury St.
CHICAGO, 240 Michigan Ave.
PITTSBURG, 138-148 Beatty St.
CLEVELAND, 407 Rockwell Ave.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $3.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 25, 1908.

Effect of Automobiles on the Highways.

Nothing can be more offensive to the thinking motorist, just at this time, when public sentiment has become fairly quiescent on the subject of the motor vehicle, than to have the cry raised that the automobile is a destroyer of the public highways. Leaving aside all question as to whether this is actually so or not, the very outcry which is being raised is a confession of the weakness of highway systems, and of the need of improving them to meet present day requirements.

The automobile is an indispensible adjunct to civilization even now. Its use and its indispensibility are fast growing. It is impossible to check its development, or to stifle its use. Why then, is it necessary to proclaim its destructive qualities? Rather it should be said that the roads are becoming insufficient for the demands of modern traffic, in which the automobile is a potent factor and a significant forerunner of other motor vehicles yet be built, of a huge motor traffic of the future.

The principle involved is self-suggestive when a definition—almost a eulogy of the good road—voiced by Hon. John Bankhead before the United States Senate at its last session, is considered. He said:

"Good roads are avenues of progress, the best proof of intelligence; they aid the social and religious advancement of the people; they increase the value of products; they save time, labor, and money; they are the initial sources of commerce, which swell in great streams, and flow everywhere, distributing the products of our fields, forests, and factories. The highways are the common property of the country, their benefits are shared by all, and they are needed by all; they benefit all, and all should contribute to them."

Although the Senator said nothing about the inequalities of the "contributions" which are imposed, it is a melancholy idea that while we are still struggling to bring a few paltry miles of trunk highway into shape according to the ideals of the day, we find those ideals inadequate to the needs of the day; that when we have finished our good roads, we must turn about and build better ones. But after all it is not a question of building through and through, but of covering and protecting the foundation material with a suitable and durable roof, which is the crucial point. Improvements in that respect, and more thorough and systematic methods of maintaining the public thoroughfares will probably solve the problem for many years to come, if not for all time. In the interim, the automobile is to be regarded as an instrument of enlightenment in this respect rather than as a transgressor, and those who are inclined to disparage it on this account should be silenced before they have reawakened the old, senseless spite against the automobile as a voluntary and aggressive offender.

Speed and Its Bad Influences.

That curious trait of human nature which has been disclosed by the automobile, the overpowering tendency of so very many persons for senseless and unnecessary speed, still remains unexplained. Considering the general subject of transportation methods—and going back but very few years in the consideration—the remembrance is keen to most persons of a day in the not distant past when the main streets of large and important cities were the thoroughfares on which the man of business went to and from his daily pursuits in a car, drawn by horses, at a speed averaging about four miles an hour. And in that day, there was no great demand for faster time, the call was rather for "more cars."

Cable roads were next introduced and found favor because they furnished a means of travel at a rate of speed more than double that obtained in the horse drawn vehicle. And in turn the cable roads gave way to the trolley cars, which were faster still than their predecessors.

At this period of time men and women had become used to the sensation of what they considered rapid traveling. Often on suburban roads the occupants of trolley cars rode faster than 20 miles an hour, and because of the noise and vibration from the vehicle, it seemed that a high rate of speed had been obtained and human nature was satisfied; there was elation and exhileration in the rapid movement.

Then the automobile came into fairly general use, and soon the daily press contained accounts of arrests for reckless driving, and for speeding within the city limits. From 12, 15 or 20 miles an hour, the accusations took on a more sportive aspect; pleasure seekers were accused of driving their cars at rates of speed varying from 25 to 60 miles per hour, and then the others, the masses, who owned no automobiles, began to wonder what there was about the sensation of rapid traveling that appealed, apparently with irresistible power, to the motorists. The answer to the question has not been given. Why, when on pleasure bent, a car should be driven at a rate of speed that shakes the occupants of it until they have difficulty in maintaining their positions on the seats, why it should be driven at a rate of speed that puts an abnormal strain on the power plant, transmission and, in fact, on all parts, thereby increasing the amount of wear and tear, and decreasing the natural "life" of the vehicle, is beyond the reckoning of normal man, even of those who find their enjoyment in this very practice.

It was but a short time ago that man, going to and from business, was satisfied, maybe perforce, with a rate of travel of four miles an hour, now he requires five times as fast for business purposes and ten times as fast when in the pursuit of pleasure. The tendency is dangerous and should be curbed. The danger lies not alone to the occupants of the speeding car, but to pedestrians and other users of the public highways. The opposition which automobilists have been encountering in legislative

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halls, in township boards, and in village offices, largely is due to this fanatical tendency for speed. The bad name which automobilists have in many communities is due to the same cause, and the final freedom from legislative restrictions, from discriminating road taxes and from local ordinances is going to come when the owners of motor cars bring themselves, or are brought to a realization that the pleasure of motoring comes not with the maintenance of a high rate of speed, but rather does it come when one rides at a reasonable pace which permits of the driver and the driven, riding along in a state of physical and mental relaxation which is not possible when it is known that the least unexpected happening may result in death or injuries, and be solely caused by the insatiable desire for insane speed. For the mental strain, so rarely considered, is quite as great as are the physical and mechanical strains.

Contests for Private Owners.

In educational value and in many other respects the contest for the Hagerman trophy, which occurs in St. Louis and vicinity on Saturday next, probably is worth as much as all other similar or nearly similar contests put together. It is a contest restricted to private owners and not, like all others, one monopolized by trade experts. If public performance of the sort is significant, the performance of the private owner should weigh preponderantly with the prospective purchaser who really thinks first and buys afterward.

The Motor World often has urged that more contests of the kind be promoted. In response, some men in the trade have stated that a sufficient number of owners could not be attracted to insure the success of such events. But the fact that there are 25 entrants for the St. Louis contest suggests that the contention is an empty one. Other tradesmen have opposed the idea because they fear that a competing owner may injure the reputation of their cars which is rather "rough" on the cars.

The wonder is that more of the non-trade clubs have not taken the bull by the horns and promoted events for private owners, owning and driving their own cars. It would be in the nature of promoting real sport.

Consistency is a rare jewel. One of the race promoters whose pocketbook apparently was injured by some action of the A. A. A., and who finds relief for his feelings in an automobile column which he edits, urges that the control of racing be turned over to a party of five men whom he names, one of whom, like himself, nurses a large sore spot. The consistency of the gentleman is rendered gloriously sublime by the fact that for many months he has professed to have been horrified by the discovery, made while standing on his head and gazing at his purse, that the "control" of the A. A. A. is vested in three disinterested men, whose control he well knows is of the most perfunctory character rendered necessary for corporate purposes. Apparently, five men instead of three will undo all the "evil" he has so religiously forced himself to see without the aid of either telescope or magnifying glass.

Now that automobile designers have learned the necessity of employing extremely powerful brakes, it remains to teach the user how to apply them. Under the old order of things no particular "technique" was required in handling the brakes, because even when applied to their full capacity, the effect upon the machine was not immediately evidenced. With the newer types of brake, however, much more skill must be exercised or the entire mechanism of the car will be strained beyond its normal capacity, while the tires will be ruined at an astounding rate. Having developed the perfectly efficient brake, it remains to instruct the driver to use it sparingly.

One of the women of some wealth who induced the spot light to center on her by engaging in automobile competition and who thereby came to be worth her weight in gold to press agents and newspaper photographers, is "dreadfully mad" because the A. A. A. has put up the bars against female racers. She means to try to break down the bars—indeed she does. But probably they will remain in place. Women competitors are entrancing spectacles so long as everything remains lovely. But let one of them be killed or maimed and the outcry and condemnation that rightfully will result speedily will prove the wisdom of the rule that bars them.

Having about passed through that remarkable epidemic which required that every publicity man obtain and circulate photographs of actors, actorines and chorus girls, singly and in groups, taken in the particular motor car represented by each respective press agent, we beseech that enterprising profession to save us from a further deluge of portraits of the presidential nominees and their wives, children, cousins and aunts. Since the political pot commenced to boil, we have received something less than one hundred protographs of Messrs. Taft and Bryan, not to mention other candidates, seated, standing and otherwise disposed in various automobiles. It has been in the nature of an "embarrassment of riches." Such pictures have lost the charm of novelty and no longer serve any real purpose. It is time for the publicity men to turn their energies and enterprise in other directions.

COMING EVENTS

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Minneapolis, Minn.—Minneapolis Automobile Club's annual hill climb.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Pueblo, Col.—State Fair Association's meet at fair grounds track.

July 4, Glens Falls, N. Y.—25 miles stock car race at mile track.

July 4, Baltimore, Md.—Motor Car Racing Association's meet at Pimlico track.

July 4, Long Branch, N. J.—Elkwood Park Automobile Association's meet at Elkwood Park track.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, St. Paul, Minn.—Automobile Club of St. Paul's meet at Hamline track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

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REAL RACING AT READVILLE MEET

Grant Captures Two Events—De Palma Puts Oldfield in Eclipse—Christie Best in Time Trials.

When it is said that H. F. Grant, driving a 45 horsepower Berliet, won most of the prizes at the postponed race meet of the Bay State Automobile Association, held at the Readville track, Boston, on Wednesday of last week, 17th inst., this must not be too literally construed. Grant was the only driver to take two firsts, so evenly were the events contested. The other first prize winners were L. B. Lorimer, Thomas; Stanley Webster, Stoddard-Dayton, and Ralph De Palma, Allen-Kingston, the latter making his debut at track driving. Although no records were broken fast times were made in all the events, and the big crowd—as large as any that have ever attended a Readville race meet—enthused over a well managed and interesting meet.



H. F. GRANT (BERLIET), WINNER OF TWO EVENTS AT READVILLE

Grant drove a most consistent race in the 20 miles event for stripped gasolene stock chassis, covering the distance in 20:28⅕, without varying three seconds on his time for any of the miles. This event was run in two heats of five miles each and in the first De Palma, Oldfield and Dunham, the latter driving a Corbin, came together. De Palma was really the sensation of the meet and when he opened up a lead on Barney Oldfield and simply walked away from the former track champion the crowd howled, while Oldfield was disgusted. Grant, Berliet; Lorimer, Thomas, and Andrews, American, contested the second heat and it went to Grant without any trouble, Lorimer getting a place in the final by making better time than had Oldfield in the first heat. This brought Grant, De Palma and Lorimer together for the 20 miles final, which was a pretty race. Grant nosed his way to the front at the start with De Palma a close second. This order was maintained until the finish, the first named winning by a hundred yards.

There were only two entries in the two miles event for cars of 40 horsepower or less, and Lorimer edged away from Synder, Oldsmobile, early in the race, and lapped him in the 17th mile. The time was 21:56⅗.

All the crack drivers came together for the first time in the 5 miles free-for-all for runabouts, and it was decided to run this in heats, one in each to qualify and the second in the fastest heat, to get in the final. Oldfield took the first heat, but De Palma clung to him all the way and got in the final. The second heat had Lorimer, Wing and Andrews in it, and Lorimer got the jump at the start and with Wing in close pursuit the pair fought it out to the finish. The final heat brought De Palma, Oldfield and Lorimer together, and this was perhaps, the finest race of the day. The cars kept together all the way until the last stretch, when De Palma in a great burst of speed passed Lorimer and Oldfield. The latter tried hard to come back with a sprint, but the new crack was not to be denied and he won his first track race. De Palma is an oldtime bicycle and motorcycle crack, who after nearly five years of earnest and constant pleading, recently had lifted a term of indefinite suspension imposed for a lapse he had committed in a motorcycle race.

Because he had made the fastest time for the mile, 58⅗ seconds, De Palma was put on scratch in the five miles handicap, with Lorimer, Thomas-Detroit, on 100 feet; Grant, Berliet, 700 feet, and Andrews, American, 3,200 feet. At the start it narrowed down to a fight between De Palma and Grant, but the latter had an advantage in the handicap.

Stanley Webster, Stoddard-Dayton, had no trouble in winning the curtain-raising five miles for stock touring cars and the pursuit between Seymour, in the Christie car and Basle, in the "Flying Dutchman." proved easy for the latter, as Seymour quit in the third mile.

The fastest time of the day was made by Walter Christie, driving his own car, in the mile time trials. Basle, in the Mercedes, which is better known as the "Flying Dutchman," was second in 58 seconds, Christie's time being 56⅗ seconds. The summaries:

Five miles, gasolene stock touring cars—Won by Stanley Webster, 36 horsepower Stoddard-Dayton; second, R. S. Crawford, 40 horsepower Crawford; third, F. E. Wing, 40 horsepower Marmon. Time 6:10⅗.

Five miles, free-for-all, gasolene stock runabouts—First heat won by Barney Oldfield, 57 horsepower Stearns; second, Ralph De Palma, 40 horsepower Allen-Kingston. Time, 5 23. Second heat won by L. B. Lorimer, 40 horsepower Thomas-Detroit; second, F. E. Wing, 40 horsepower Marmon. Time, 5:31⅗. Final heat won by Ralph De Palma, 40 horsepower Allen-Kingston; second, Barney Oldfield, 57 horsepower Stearns; third, L. B. Lorimer, 40 horsepower Thomas-Detroit. Time, 5:23⅘.

20 miles, stripped stock chassis—First heat, five miles, won by Ralph De Palmea, 40 horsepower Allen-Kingston; second Barney Oldfield, 57 horsepower Stearns; third, Joe Matson, 32 horsepower Corbin. Time, 5:13. Second heat, five miles, won by H. F. Grant, 45 horsepower Berliet; second, L. B. Lorimer, 40 horsepower Thomas-Detroit; third, J. Andrews, 44 horsepower American. Time, 5:19⅕. Final heat, 20 miles, won by H. F. Grant, 45 horsepower Berliet; second, R. De Palma, 40 horsepower Allen-Kingston; third, L. B. Lorimer, 40 horsepower Thomas-Detroit. Time, 20:27⅕.

Special 20 miles race for 40 horsepower and less—Won by L. B. Lorimer, 40 horsepower Thomas-Detroit; second, J. S. Snyder, 36 horsepower Oldsmobile. Time, 21:56⅗.

Five miles Handicap, free-for-all, gasolene cars—Won by H. F. Grant, 45 horsepower Berliet, (700 feet); second, R De Palma, 40 horsepower Allen-Kingston (scratch); third, L. B. Lorimer, 40 horsepower Thomas-Detroit (100 fet). Time, 4:59⅕.

Five miles pursuit race—Won by Charles Basle, 90 horsepower Mercedes; Morton Seymour, 50 horsepower Christie, second. Time 4:49⅗.

Mile against time—Walter Christie, 56⅗ seconds; Charles Basle, 58 seconds.

Chicago Postpones Its 1,000 Miles Run.

The Chicago Motor Club has postponed indefinitely its 1,000-mile reliability contest which was to have occurred June 24-27. But seven entries had been attracted.

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SUPERSEDING THE WAR HORSE

Gen. Grant's Estimate of the Automobile's Value in Military Operations—Practical Test at Pine Camp.

Though automobiles have been tested by army officers in respect to their utility as dispatch bearers over long distances, the army in this country has had no opportunity to observe the adaptability of motor cars for field manoeuvres until the present time. The military operations now being conducted by regular troops and State militia at Pine Camp, New York, under the direction of Gen. Grant and officers of the regu-



MAJOR-GENERAL GRANT IN THE FIELD AT PINE CAMP

lar army, have furnished an opportunity for motor car experiments, which was not to be neglected, and two cars are regularly employed in connection with the work of the troops. Both of the machines are Studebakers; one is used by Gen. Grant in the general routine of his field work, while the other is in the service of his staff.

Pine Camp consists of 144 square miles of every conceivable sort of country. Much of it consists of stumps and ruts, while the roads are nothing more or less than deep sand pits, often running over rough, steep hills. Under these conditions the machines are receiving the severest test, and it speaks well for them than Gen. Grant has expressed entire satisfaction with the results obtained from their use. In an interview, the commanding general said:

"I should not have believed that it was possible for an automobile to go the places these two Studebaker machines have gone if I myself had not witnessed it. During the week they have been here they have been put to the most severe test and haven't been out of commission for a minute. They are especially valuable in plotting out problems where it is necessary to carry maps and other paraphernalia not easily conveyed on horseback. I believe that not only is the automobile of great value in military work but, more than that, it is a necessity. I am greatly pleased with the excellent showing made by the two machines being tested."

Nine Perfect Scores in Atlanta Run.

It required a lottery to determine the cup winners in the 382 miles sealed bonnet run from Atlanta, Ga., to Macon and return on Thursday and Friday, 18th and 19th insts. The contest was under the auspices of the Fulton County Automobile Club, backed by an Atlanta paper, which furnished the prizes.

Of 13 cars that started, nine finished with perfect scores, and as there were only three cups, one for each of the three classes of cars, they were awarded to the car in each class whose representation fished the lucky number out of a hat. The prizes went to the Stearns in Class A, the Thomas, in Class B, and the Ford in Class C. Silver medals solaced the top-notchers who were unlucky in the drawing. There were large crowds at Atlanta to witness the start, at Macon to welcome the cars there, and at Atlanta to see the finish, while there were enthusiastic gatherings of spectators at many points along the route. An inspiriting feature of the finish was the arrival of seven of the leaders who got together just outside of Atlanta and entered the city in a sort of parade. The relative performances of the several cars were not determined until the following day, the prizes being awarded in the evening at an enthusiastic meeting of all concerned.

Class A.

No. 12	White steamer	1,000
No. 13	Stearns	1,000

Class B.

No. 1	Haynes	838
No. 2	Thomas	1,000
No. 3	Oldsmobile	1,000
No. 6	Grout	Quit
No. 9	Pope-Hartford	1,000
No. 10	Stevens-Duryea	1,000

Class C.

No. 4	Maxwell	630
No. 5	Ford	1,000
No. 7	Brush	915
No. 8	Maxwell	1,000
No. 11	Ford	1,000

DEALERS DIP INTO RACE CONTROL

Go Through the Motions of Taking Charge of Briarcliff Affair—Moore and Morrell in Background.

The "dozen or more dealers" who believe that they should have a great deal to say about race sanctions and disqualifications and one of whom is credited with saying that the box office should have something to say about the control of sport, finally have unveiled themselves. They prove to be some of the dealers who were "rounded up" by "good, old" Tom Moore after his wonderful Metropolitan Automobile Association, which consisted chiefly of himself, blew up, following the Motor World's illumination. Moore then formed the dealers into the Automobile Manufacturers Committee and promoted the Briarcliff road race.

Moore, who, by profession, is a press agent, was first also to discover how valuable is a man like Robert Lee Morrell to Moore's profession. Last week, Moore and Morrell went through the motions of laying down their Briarcliff plumes and duly turning them over to the "dozen or more dealers." They—that is, the chairmanship and the secretaryship, respectively—were as duly assumed by C. F. Wyckoff and Sidney B. Bowman, who are credited with saying that they again will run the Briarcliff race, whether or no the A. A. A. or the National Association of Automobile Manufacturers approve it. In due course, it is expected that Moore and Morrell will be "induced" to return to the assistance of the dealers, who, it is fair to guess, eventually will kick themselves in the shins when they realize how they have been "used" to pull other's chestnuts out of the fire.

How the A. C. A. Proves Its Best Wishes.

According to the Louisville (Ky.) Herald, emissaries of the disgruntled Automobile Club of America (of New York), were in that city last week endeavoring to induce the Louisville club to secede from the American Automobile Association, which when it found that it could not dominate the A. A. A. resigned therefrom, accompanying its resignation with what it styled "best wishes," and which now is engaged in proving how much they are worth.

Idealism of the New England Tour.

The New England tour of the Automobile Club of America left the club house in New York on Saturday last with 18 cars in line, including the one occupied by the manager. It was styled "the ideal tour." Some of the idealism was reflected by two rather large flags with which each car was decorated and by a set of rules which might serve as well for a touring contest or an endurance run.

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PATENTS AS PRICE PROTECTORS

Their Legal Effect as Remedy for Rate Cutting not Generally Appreciated—Court Rulings on the Point.

The fact that the Weed Chain Tire Grip Co. recently was able to obtain an injunction restraining the Times Square Automobile Co. from cutting the price of its product and that subsequently Judge Ward in the United States Circuit Court in New York imposed a fine of $100 on the price-cutters for violating the injunction, excited wide interest in the trade. It clearly indicated that where there is a will there's a way to check price-cutting, and to make it an expensive occupation.

In discussing the subject a few days since, T. F. Bourne, 220 Broadway, New York, a counsellor who makes a specialty of patent and trademark causes, and who has handled several such cases for automobile concerns, remarked that the average patent owner has not more than a very superficial knowledge of the great power in respect to the fixing and maintenance of prices which the patent gives to him. In fact, Mr. Bourne talked so interestingly to the Motor World representative that he was induced to reduce his views to writing. These views constitute a fund of information that should serve to stiffen many backbones in the automobile trade. Mr. Bourne says:

"The Supreme Court of the United States, in E. Bement & Sons vs. National Harrow Co., 168, U. S. 70, said:

"'The very object of these laws is monopoly, and the rule is, with few exceptions, that any conditions which are not in their very nature illegal with regard to this kind of property imposed by the patentee, and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the courts. The fact that the conditions in the contracts keep up the monopoly or fixed prices does not render them illegal.

"'The provision in regard to the price at which the licensee would sell the article manufactured under the license was also an appropriate and reasonable condition. It tended to keep up the price of the implements manufactured and sold, but that was only recognizing the nature of the property dealt in, and providing for its value so far as possible. This the parties were legally entitled to do. The owner of a patented article can, of course, charge such prices as he may choose, and the owner of a patent may assign it, or sell the right to manufacture and sell the article patented, upon the condition that the assignee shall charge a certain amount for such article.'

"With respect to the Interstate Commerce Act, the Court said:

"'But that statute clearly does not refer to that kind of a restraint of interstate commerce which may arise from reasonable and legal conditions imposed upon the assignee or licensee of a patent by the owner thereof, restricting the terms upon which the article may be used and the price to be demanded therefor. Such a construction of the act, we have no doubt, was never contemplated by its framers.'

"It is thus seen that patentees have a particular and peculiar monopoly which they may exercise to their best advantage. The foregoing decision was followed in John D. Park & Sons Co. vs. Hartman, 152 Fed. Rep., 24, where the court said:

"'That articles made under patents may be the subject of contracts by which their use and price in sub-sales may be controlled by the patentee, and that such contracts, if otherwise valid, are not within the terms of the act of Congress against restraints of interstate commerce or the rules of the common law against monopolies and restraints of trade, is now well settled. . . . .

'The patent grants an exclusive right to use, to make, and to sell. The patentee may grant, if he will, an unrestricted right to make and sell or use the device embodying his invention, or may grant only a restricted right in either the field of making, using, or selling. To the extent that he restricts either one of these separable rights, the article is not released from the domain of the patent and any one who violates the restrictions imposed by the patentee, with notice, is an infringer.'

"It is well established that where a dealer or jobber, or even a licensee, under a patent breaks the terms of the contract he entered into relative to the patented article, he may be sued as an infringer of the patent.

"In National Phonograph Co. vs. Schlegel, 128 Fed. Rep., 733, the Court said:

"'An unconditional and unrestricted sale by the patentee, or by a licensee authorized to make such sales, of an article embodying the patented invention or discovery, passes the article without the limits of the monopoly, and authorizes the buyer to use or sell it without restriction; but to the extent that the sale is subject to any restriction upon the use or future sale the article has not been released from the monopoly, but is within its limits, and, as against all who have notice of the restriction, is subject to the control of whoever retains the monopoly. This results from the fact that the monopoly is a substantial property right conferred by law as an inducement or stimulus to useful invention and discovery, and that it rests with the owner to say what part of his property he will reserve to himself, and what part he will transfer to others, and upon what terms he will make the transfer.'

"In Edison Phonograph Co vs. Kaufmann, 105 Fed. Rep., 960, the Court said:

"'I cannot doubt that the complainants have the right to sell their patented phonographs with the restrictions and upon the conditions contained in their "jobber's agreement," and that dealers buying the patented instruments from the jobbers with notice of those restrictions and conditions are bound thereby.'

"Thus, the owner of a patent who manufactures and sells a patented article may reserve to himself, as an ungranted part of his monopoly, the right to fix and control the price of the patented article at which jobbers or dealers buying from him may sell to the public, and a dealer who buys from a jobber with knowledge of such reservation, and re-sells in violation of it, is an infringer of the patent, and it was under this doctrine that the chain grip case referred to above was decided.

"There is another point in patent law of importance to manufacturers of patented articles, and that is the restrictions a manufacturer may place upon the use of the goods. The manufacturer may restrict the use of the patented articles, by giving proper notice, of other parts to be used in connection with the patented article, even though such parts are not patented. This has been sustained by the United States Courts, in Heaton-Peninsular Button-Fastener Co. vs. Eureka Specialty Co., 77 Fed. Rep., 288; in Rupp & Wittgenfeld vs. Elliott, 131 Fed. Rep., 730, and other cases. In the first named case the licensee was given the right to use the machine only in connection with unpatented staples furnished by the plaintiff, and it was held that the owner of the patent had the right to sell such machines subject to the condition that they should be used only with fasteners manufactured by him. The machines were sold and not leased, yet the Court held that the purchaser of the machines under such circumstances would be in effect a mere licensee, and the use by him of the machines contrary to the conditions imposed would be not only a breach of the contract but a violation of the monopoly for which an injunction suit would lie. It was also held that the manufacture and sale by another party, to the users of such machines, of staples which were intended to and only could be used therein was a contributory infringement and would be enjoined. The United States Supreme Court has cited this case with approval.

"In the Rupp case machines were licensed by the patent owner with restrictions that they could be used only with wire purchased from such owner; the wire was especially adapted for the machines and put upon certain reels, and the sale of wire by others adapted and intended for use in these machines, with knowledge of such use, was prohibited. In this case the Court said:

"'The mere sale of wire which might be used in the Elliott machines, or for some other non-infringing use, would by no means constitute the appellants infringers. It is the sale of wire adapted to the infringing use, with the intent and purpose that it shall be so used, which constitutes contributory infringement.'

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"In Tubular Rivet & Stud Co. vs. O'Brien, 93 Fed. Rep., 200, it was held that where the owner of a patent for setting lacing studs licensed the use thereof on condition that the licensee should only use studs manufactured by the licensor, such studs not being patented, it was an infringement for the licensee to use the machine for setting studs obtained from others in violation of the license, and it was further held that a third party who sells to the licensee studs of his own manufacture, knowing that they are to be used in the patented machine, in violation of the terms of the license and intending that they should be so used, is guilty of contributory infringement, and will be enjoined.

"This doctrine of contributory infringement is very important to patent owners. It is to the effect that one person may not sell an essential portion of a patented combination, with the knowledge that it will be used by another who manufactures the other portion of such combination, to enable the different parts to be used in the completed combination."

New Recording Speedometer-Odometre.

A new device for registering speed, as well as for recording the movement of a car, has been brought out by the Recometre Co. of America, who recently have opened an office at Seventy-fourth street and Broadway, New York City. The instrument, which is called a Recometre, consists of a speedometer and an odometer combined with mechanism designed to record upon a strip of tape a permanent record of the movement of the car. This permanent record is obtained in ink and shows the number of miles traveled, the number of minutes to the mile, the number of stops made, and the exact duration of each stop. The records are made through the medium of a self-inking recording pen whose action is governed by the same mechanism that actuates the speed indication. The construction of the Recometre permits of an examination of the tape at any time, but the record of the car for the last half hour constantly is in view. Obviously this arrangement can be used to positively settle all disputes which may arise in relation to broken traffic regulations, or questionable police timing.

One of the commendatory features of the device is that it is under the control of the owner and cannot be affected by any one not in possession of the key. The instrument is operated by a flexible shaft attached to the front of the car in the usual way, with the exception that it differs from many speed indicating devices in that the link attachment is positive and cannot be removed after it is set. This arrangement precludes the possibility of anyone tampering with the machine without the owner knowing of it. The dimensions of the instrument are 5x5x5½ inches. It is finished in polished brass and is designed as a dash attachment.

ADJUSTING CONTROL MECHANISM

Importance of Eliminating Lost Motion and Disalignment of Parts—Keeping the Gears in Register.

Transmission mechanisms do not give the owner and repairman the trouble they did up to within a short time, more especially because designers have come into a just appreciation of the requirements of the case. If the adjustment of the various parts is maintained in its proper relation, and the mechanism of control is handled with even moderate rationality, there is little danger of trouble arising from broken gear teeth, and twisted shafts, such as was so prevalent a year or two ago. At the same time there are one or two points about the average mechanism of this sort, particularly if of the so-called sliding gear type, which require especial attention from time to time.

Aside from poorly tempered metal in the gears, and distinctly abusive handling, the most prevalent cause of gear difficulties arises from lost motion in the connecting mechanism leading to the control lever, and in poor adjustment in the same quarter. The result is apt to be the same in either case, and not simply produces lack of registry between the ends of the gears when they are supposed to be in mesh, but causes them to go into and out of mesh at slightly earlier or later times than are indicated by the position of the lever. The result is that the operator experiences no small amount of uncertainty in changing gears, and in consequence, is quite apt to handle the lever much more harshly than he otherwise would do, so tending to aggravate the difficulty.

For the good of the gearset, therefore, the transmission case should be looked into periodically, and the various gears tested for accuracy of mesh, any possible lost motion in the connected linkage being sought out at the same time. It is a matter of but a few moments' inspection to try out the set in all its positions, when the cover of the case has been removed for the purpose of inserting new lubricant. If any lost motion exists, it can be taken up by adjustment, in many instances. Otherwise bushings, or possibly, new parts, may be required.

In a well made car, lack of registry in the gears, is usually a sign that something is radically wrong—a rocker arm sprung, a bracket broken or displaced, or some part pulled badly out of shape. Rectifying these slight difficulties serve to bring the handling of the machine back into its normal condition with surprising success, and also prevent the possibility of a more serious condition arising, which is apt to result directly in an accident of a disastrous nature.

For convenience and certainty in handling the car, nothing is more essential than close and accurate adjustment of the control mechanism. This principle applies most particularly to the parts regulating the transmission of power from the motor to the driving wheels.

Wonderful Promise in New Tire.

Among the bits of promise which are held out in prospect to the British motorist at this time is a new and improved form of pneumatic tire, which it is said a large firm of cable builders has been at work upon for more than two years. During this time, experiments have been made on a specially prepared testing track, upon which the tires are tried out, as mounted on an electric vehicle. All sorts of road conditions are counterfeited on the course, which is so severe that the average tire of commerce is said to give way, either from bursting or wear, in somewhere about 100 miles. The new product has been so thoroughly developed up to this time, that it will stand over 3,000 miles under similar conditions, as is claimed. In other words, it is claimed that the new tires, which are soon to go into the market, are 30 times as durable as any which have yet made their appearance.

Remedy for Blown Out Tire Casing.

Of the several possible methods of removing the difficulty which arises from a blown-out tire casing, two which readily suggest themselves are the complete renewal of the shoe, and the binding up of the wound with a band or two of the Kimball tire casing, made by the Kimball Tire Case Co., Council Bluffs, Iowa. As the latter method ensures considerable additional use to the cover without waiting on the tire man, its advantages are obvious. The Kimball tire casing is merely a series of shorts bands of steel plates linked together and surrounding the shoe, the end pieces being hooked over the flange of the rim. Any number of such bands may be used from one or two, as may be required to reinforce a weak spot, to a sufficient number to form a complete armor for the tire. In any event, they form a durable and flexible protection, secure traction where the road surface is bad, and prevent skidding.

How to Insure the Water Circulation.

On automobiles where the water circulation is dependent on the action of a friction-driven pump, it often happens that the contact between the wheel of the pump and the fly wheel of the engine is not sufficiently firm for the purpose of circulating the water. Obviously this lack of contact will explain the cause of the water circulation being sluggish, and it is of the greatest importance that the circulation should be constant and as rapid as possible. Naturally to overcome this condition of affairs it only is necessary to increase the frictional contact between the pump and the fly wheel. Care should be taken to keep both of these wheels free from oil and grease.

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OLDSMOBILISTS HOLD REUNION

Third Annual Outing of Clan—Motorists Beat Scribes at Baseball—New Owner Wins Touring Car.

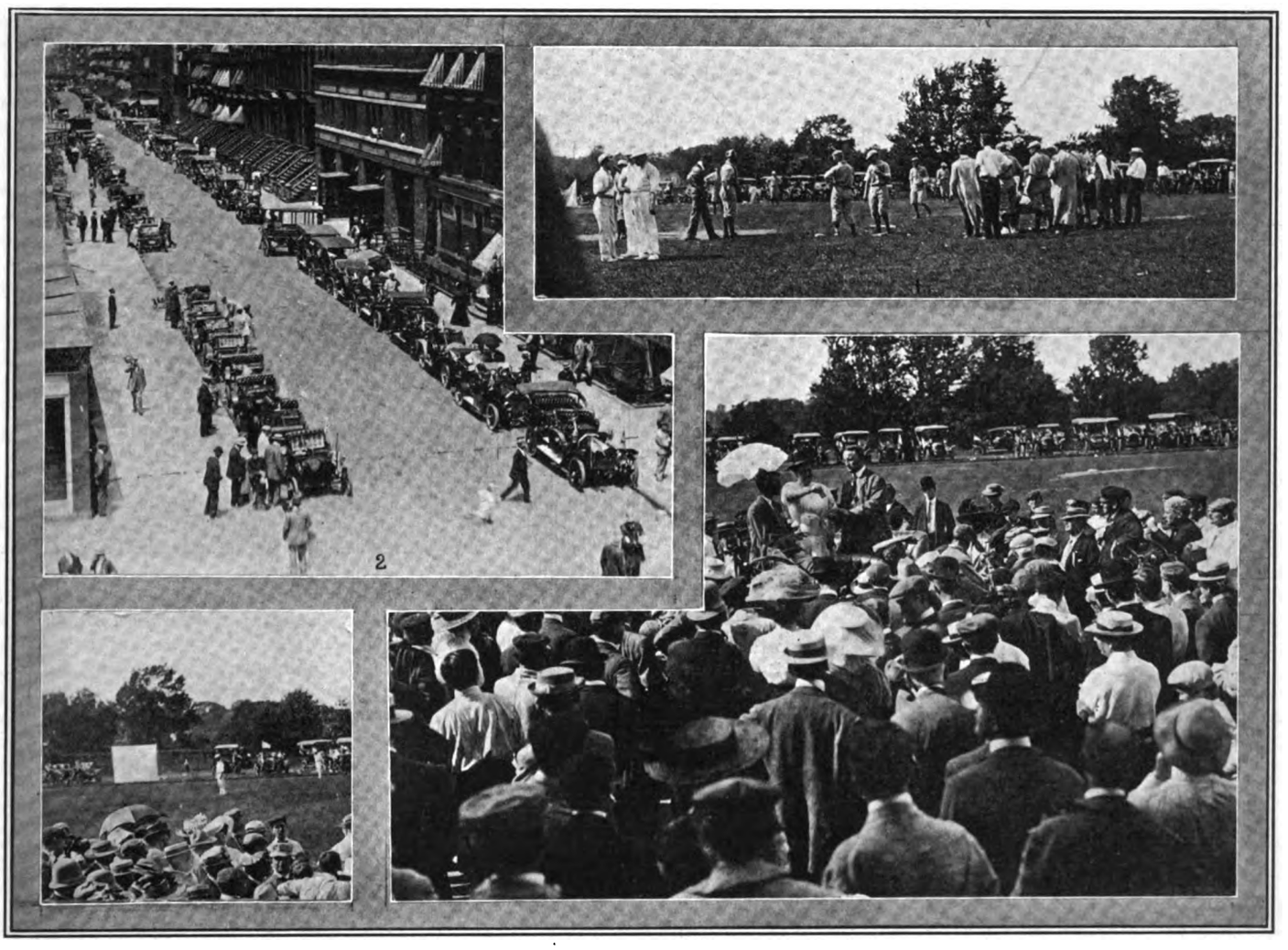
Nearly 200 owners answered the call of the Cutting-Oldsmobile clan and came together on Saturday last, 20th inst., the occasion of the gathering being the third annual reunion of Oldsmobile owners. The two former reunions were held at the Empire City track, between New York and Yonkers, and have been marked by racing events. This year's gathering took place at Columbia oval, situated on the corner of Jerome avenue and 210th street, New York, and was signalized by a base ball game which displaced the usual racing features of the former gatherings.

This year's reunion, like its predecessors, was organized and controlled by General J. T. Cutting. The Oldsmobilists gathered in the vicinity of Fiftieth street and Broadway, where they formed in line for a parade which started at 11 o'clock, with the General and his staff at its head in a modern touring car. After the General came a commercial vehicle containing the Old Guard band and following them came Oldsmobiles of every type and vintage, from the little curved dash pop guns of years ago to the 1908 touring cars and roadsters.

On reaching the grounds the cars lined up around the field and then the fun began in the form of a ball game between an Oldsmobile team and one composed of newspaper men. Despite the fact that Johnny Wetmore played right field for the scribes, and that Umpire Fred J. Wagner was full of sympathy for, and lent all the aid in his power to the newspaper writers, the Oldsmobile team won and a scorer, who feared the power of the press, charitably said that the score for the five innings was 12 to 9 in favor of the motorists.

After the ball game a drawing was held for a $2,750 Olds of the latest type. Numbered tickets for the drawing had been issued to all the Olds owners who participated in the morning parade. L. L. Schmidt, described as a Hoboken (N. J.) hardware merchant, was the lucky individual whose ticket drew the coveted prize. In winning the machine, which had been donated by the company, Schmidt exemplified the Biblical quotation "to him that hath shall be given," for only recently he entered the Olds clan through the purchase of a $1,900 runabout. However, he accepted the prize without protestation.

SCENES INCIDENTAL TO THE OLDSMOBILE REUNION.



1. BETWEEN INNINGS AT THE BALL GAME. 2. LINED UP FOR THE PARADE. 3. DRAWING FOR THE OLDSMOBILE.

Club Wars on Reckless Driving.

In the hope of checking reckless automobile drivers, the St. Paul (Minn.) Automobile Club has adopted a rule which requires all the members to report every case of reckless driving that comes under their notice. The club engages to punish the offenders whether or not they are club members. The club also has offered a reward of $50 to any one who establishes the identity of any driver who is concerned in an accident and drives away without identifying himself. In addition to these efforts to be of general benefit the club offers a reward of $50, which reward of a like amount will be paid to any person who apprehends a thief who steals a machine belonging to a member of the club.

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DECEPTION PUNISHED AS LARCENY

Massachusetts Court Convicts Sellers of Worthless Car—Victims Bought Off, but Compelled to Prosecute.

In Massachusetts they have laws which, if the same were to be enforced in New York State, would bring weeping, wailing and gnashing of teeth in the camps of some of the cut-rate second hand dealers in automobiles, whose methods of business have oft brought sorrow to their innocent patrons. One of these laws for the protection of the unwary has resulted in the conviction on Friday, 19th inst., of Andrew F. Gormley and Paul C. Hersey, on a charge of larceny in the Superior Criminal Court of Boston.

From the evidence in the case it was established that Gormley and Hersey advertised an automobile for sale, and claimed that the machine was in good condition (as is usually the case, see daily papers). Frederick B. Drury, of South Barrington, N. H., read the advertisement, and with his wife went to Boston, where he met the defendants and bought from them for $200 the automobile which they had advertised as being in good condition. When the machine was tried, it was found to run down hill in very good time, but it would not go in any other direction. Drury complained to the authorities and the sellers were arrested. They were to have been tried on Friday, 12th inst., but the complainants were not in court on that day. A court officer was sent after the Drurys, and they appeared the following Friday. In the trial which followed, it was brought out that Drury had gotten back most of his money and was not especially interested in prosecuting the prisoners; the latter, however, were convicted and will be sentenced this week.

Status of Old Licenses in New Jersey.

Attorney-General McCarter, of New Jersey, has handed down an opinion regarding the validity of licenses issued by the State prior to April 16 last, when the new law was approved by the Governor, which will result in a saving of several hundred thousand dollars to the State treasury and a corresponding loss to motorists. The Attorney-General holds, and has so advised J. B. R. Smith, Commissioner of Motor Vehicles, that licenses issued in the period from January 1, 1908, to April 16, 1908, shall be good for a full year, but is of the opinion that there shall be no pro rata license fees for the fraction of a year remaining between the expiration of a license taken out in 1907 and December 31 of this year.

The opinion does away with the contention that licenses issued in 1907, no matter when, were valid until the end of this year by the amendment of the law passed last winter. Had this conception been upheld New Jersey would have suffered a loss of several hundred thousand dollars in fees that will now have to be paid, as well as placing the State motor vehicle department in the embarrasing position of having collected nearly $100,000 in fees illegally since the passing of the law.

"Square Deal" Plan Superseding Traps.

The "square deal" plan, by which a very general observance of the speed limit by motorists passing through the town of Middleboro, Mass., has been brought about, is attracting the attention of other town authorities in the Bay State. This plan, which has been described in the Motor World, is likely to be adopted in a number of towns, although there are some places where it is felt that the town itself would not go to the expense of displaying large banners as Middleboro has done through the local automobile club. The town of Wareham is the first to follow along the line shown by Middleboro, where the selectmen have just authorized local motorists to go ahead and display "square deal" banners. Arrangements are already started for the formation of either a permanent automobile club to have charge of the matter or to have a committee to immediately put up the speed banners and let the club organization come along in a week or two. The selectmen promise to abolish the "traps" permanently if the motorists passing through observe the "square deal" by limiting their speed to the rate specified on the banners.

Jersey Trap with Four Operators.

Supplied with about a quarter of a mile of insulated wire, a stop watch, some electric bells, six dry cells, a push button or two and a couple of ropes, to say nothing of a few signalling flags, three Jerseyites under the leadership of L. J. Underhill—a Perth Amboy detective—are operating a variation of the usual form of constabulary speed trap in the vicinity of New Brunswick, N. J. When a car enters the trap, the man at the beginning of the block signals to Underhill, who is a quarter of a mile away, by means of the push button and bell; Underhill starts the watch, and stops it as the automobilist passes him. If the speed limit has been exceeded a signal is given to a flagman still further along, who signals the car to stop; if the signal is disregarded, a fourth man still further down the road is notified and he stretches a rope across the highway. When the offending car stops, a Jersey constable is at hand to uphold the majesty of the law by a prompt hearing of the charge.

El Paso Owners Organize a Club.

The El Paso Automobile Club has been organized in El Paso, Texas. The following temporary officers have been elected: Chairman, E. P. Hughes; secretary, G. R. Le Baron; chairman of executive committee, H. C. Miles; secretary of executive committee, W. R. Humphries.

CHICAGO WINS WHEEL TAX FIGHT

Supreme Court Decides in Favor of the City Ordinance—Automobilists Organize a New Attack.

Chicago's wheel tax ordinance has again withstood the attacks of automobilists and other vehicle owners who have been fighting it in the lower courts and in the Supreme Court. The lower courts held that the statute and the ordinance are constitutional as far as they relate to vehicles used for business purposes, but that vehicles used for pleasure are exempt from taxation under provisions of the law. The Supreme Court, Justice Cartwright dissenting, holds that all vehicles, both business and pleasure, may be taxed. The decision contains the following paragraph:

"It is urged that the Legislature is without power to authorize the City of Chicago to pass an ordinance requiring vehicles using its streets to pay a license fee for keeping the streets and alleys in repair. We think it clear that a license may be imposed and the fee for such license collected with a view to revenue only, and if such be the law, the fact that the license required to be paid by said ordinance in this case is for revenue only does not render the statute under which the ordinance was passed and the ordinance itself unconstitutional."

Immediate collection of the wheel tax is proposed by the city officials, and the resulting revenue is expected to give Chicago an annual fund of $750,000 for street repairs. City Clerk McCabe was notified by First Assistant Corporation Counsel Wetten, on the 20th inst., that this decision, rendered in what is known as the Harder cases, covers practically all the points involved in the other suits pending against the validity of the measure and that it would be a waste of time to await their decision.

City records show that owners of 1,680 vehicles have already voluntarily paid $9,806 in taxes to the city. Only eight automobiles are included in the number.

The automobilists, who have made the most determined effort to evade the tax, continued their fight on the 19th inst., when an amended bill was filed in the Superior Court by C. A. Coey and several hundred others. The automobilists make the novel plea that their machines use only parks and boulevards, which are not under control of the city, and that the municipality does not pay for their repair. They also contend that the wheel tax is a double tax on automobiles.

Greece Musters Sixty Automobiles.

In Greece there are 60 automobiles. Thirty of these are owned by residents of Athens, and the rest are scattered throughout the country. Gasolene is sold for 60 cents a gallon.

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ABOUT THE OXY-ACETYLENE TORCH

Its Adaptation to Quick and Effective Welding—Marvelous Economy in Repair of Broken Parts.

Great prominence is given to the use of the new and high grade materials to which so much of the improved service of the modern car is attributable. But while the progress which has made possible their use is loudly acclaimed, the fact that it represents only a very small proportion of the progress which has been necessary in order to make their use efficient and economical is not so generally appreciated. This idea is developed in a recent bulletin issued by the technical committee of the Long Island Automobile Club, of which Louis T. Weiss is chairman, and which is one of a notable series of "pointers" to the members on the management and upkeep of their machines.

The point brought out in this connection is that following the successful adoption of ball bearings, a special metal had to be developed for the balls; that the progressive growth of high-grade steels has resulted in the introduction of special tool steels, without which it would be a practical impossibility to handle the new metals. As a crowning element in the metallurgical structure, is mentioned the discovery of a flame "hot enough to melt broken parts together, uniting them into a stronger unit than we had before it had been broken." It is with the properties and utility of this, the oxy-acetylene flame, that the paper deals most particularly, and more especially with the economical phase of its use.

As is already generally known, the oxy-acetylene flame, corresponds exactly to the oxy-hydrogen flame which is familiar in the mechanic arts. As used, the acetylene gas is burned in a surrounding mantle of oxygen. The chemical action is the same as when acetylene is burned in the ordinary way in the air, but as a large proportion of the air is useless for purposes of combustion, the action is less rapid than when carried on in the presence of pure oxygen. Hence the tremendous degree of heat developed, and the high temperature of the flame which approaches that of the electric arc, if not surpassing it, and has been determined to range somewhere about 6,300 degrees, Fahr.

"You have probably seen the storage battery maker use a torch with oxy-hydrogen gas in burning lead together at the terminals or connections between the several cells," says the bulletin above mentioned. "The oxy-acetylene torch produces, according to its size and the purpose used, a flame consisting of an outer mantle and the exceedingly hot, but small and pointy inner core. When the core of this flame is played onto a piece of steel, cast iron or any other metal, such surface melts immediately under the terrific heat. The end of a steel wire or rod of suitable thickness (depending on the size of flame and job in hand) may be brought into the flame when it melts and flows on to the molten surface, and unites therewith thoroughly. In that manner cast iron, aluminum, brass, even steel and cast iron, etc., can be united. In case of a break of an axle, steering knuckles or any other part where the pieces must be butted together closely, the flame would not get into the break far enough to make a good job. In such a case the operator cuts enough material away so as to make a wedge-shape opening, enabling him to melt both surfaces, adding steel to fill it up from the bottom and make a perfect weld. If the mechanic is an expert with the torch he will succeed in uniting the broken part and heating it to a red heat not further than perhaps one-half of an inch distant from the break, so that a hole or screw located that distance away will not be disturbed, and a pin or nut fitting such hole or screw previous to the breaking will do so after the repair has been done.

"As before said, not the steel parts only can so be repaired quickly and effectively, but the aluminum crankcase as well as a cylinder, a lug on them or any other part, which although inexpensive cannot be obtained quickly, can be repaired quickly and satisfactorily."

Referring to a couple of instances in which the writer's own observation has enabled him to judge of the economy of the process, the case of a broken axle on a well known make of car is mentioned. The break occurred in the front axle and in the lower member of the fork receiving the steering knuckle, the part being completely broken off.

"A new axle meant an expense of about $75," continues the report: in contradistinction to which, "it was repaired with the flame in less than an hour, and cost $2.50. The thread in the hole, less than three-quarters of an inch away from the break, received the screw without difficulty. The axle is just as good as it ever was, and a little stronger in the place where it had been broken.

"Another, but less serious break; namely, the breaking in two of a malleable iron exhaust elbow casting, follows:

"A new elbow could have been bought for $1.50, but it not being in the stock of the agents, a delay of ten days was probable. One dollar paid for the welding of it, and it was none the worse for looks."

Demountable Front Fenders for Cars.

Many of the better designed cars have front fenders so contrived that they may be readily dismounted when it is necessary to effect repairs upon the motor. Where such arrangements exist, it is, of course, necessary to make sure that the adjustments are kept secure whenever the machine is in use, otherwise there is danger of their getting "adrift" and injuring the machine.

TOUCHING UP AND VARNISHING

Difficulties Attending Renovation of the Body Finish—How to Meet Them—Important Preparatory Work.

"Touching up and varnishing," is the time-honored method of refreshing the appearance of a vehicle when circumstances do not justify its being given a thorough going over. In the lore of the carriage trade it has played a most important part for many years, and naturally enough, with the development of the automobile paint shop, it has come to the front in that connection as well. But touching up a buggy and touching up a motor car are two very different things, and the experienced painter who attempts to revamp a shabby-looking car often finds himself plunged in a well-nigh hopeless task. The economy brought about by touching up a used car in some cases, is broadly offset by the poor results obtained in others when the same process is applied. And the question of choice is far more complicated than in the case of the horse-drawn vehicle. Concerning the ethics of the matter, the Carriage Monthly gives some good advice.

"To a greater extent than the horse-drawn carriage, the automobile invests the work of the painter with difficulties of a not infrequently perplexing nature," says that authority. "Taking cars as they come, the surfaces are in a worse condition than the first named class of vehicles, because, without question, a much harder form of service is imposed upon the automobile. The wrenchings and twistings, oscillation, and lateral motion, etc., despite authorities to the contrary, work injury to the surface, although such injury may not always make itself apparent until the outer film of the varnish is stripped off to some extent under the erosive effects of the rubbing pad. Moreover, the general conditions of service are of a kind to put the surface into a more or less disabled state, the varnish being badly worn in some cases, having reached possibly the incipient stage of perishing, or the color showing a faded appearance, or a lack of uniformity in the wear generally. . . . .

"Probably the worst conditioned surface, as it comes to the paint shop for repairs, is the enameled one. It is claimed that this latter finish, in the main, is harder and stronger, and better fortified to withstand hard usage than the regulation paint and varnish finish, and to a certain extent this may be true, but the enameled surface after losing the primal brilliancy of its finish, and touched off with some hefty bruises, takes on a shabbier look than the paint and varnish finish is scarcely ever capable of.

"Then, too, the surface of metal, aluminum, or steel, or iron, contributes a further share of difficulty to the touch up and var-

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nish proposition. Many of these surfaces, around moldings and edges, show a scaly condition due to numerous causes, and in such cases the fragmentary structure of paint should be scraped away until a solid base is reached. Then touching the diseased parts with a pigment containing at least one part of oil to four parts of turpentine should follow. After a lapse of 48 hours these fractures and indentations may be puttied up with a good, hard-drying putty, which in due time can be evenly faced down with a block of rubbing stone dipped in raw linseed oil. Naturally, if such surface conditions exist to any considerable extent, the only permanent way of treating them is to either burn the paint from the surface entirely, or coat the old structure of pigment solidly under, say, three coats of roughstuff. They are not easily concealed by simply touching up and varnishing, although many of them are handled in this way, after facing up with putty as above advised, except in cases where glazing colors have been employed.

"Generally speaking, the line should be drawn on all jobs stopped for touch up and varnish which show any considerable extent of wear, because in a majority of instances of this kind the touching with color only serves to intensify the effect existing between the old and the new, and following the application of varnish, this effect is likely to increase rather than diminish.

"It has always been a question with the painter of carriages, either horse-drawn or horseless, as to what should constitute the precise dividing point between the touch up and varnish job, and the one demanding more thorough treatment; and the common understanding seems to have been reached that decision in the matter rests with the individual painter rather than with any hard and fast rule promulgated by a committee of experts.

"In all touching up and varnishing work, the surface should, after cleaning, be nicely flatted out by rubbing with water and No. 00 pumice stone flour. Then touch with color to the least possible extent, using the pigment thin enough to avoid an abrupt edge which under the varnish shows rough and patchy. Flow on a fine, heavy coat of finishing varnish, which, upon the automobile as upon no other vehicle, perhaps, plays the chief part in making the prairie like surface 'a thing of beauty'."

Proper Joints for Water Connections.

Soldered joints and rubber hose should be avoided in all water connections involved in the cooling system of the car. Vibration cracks the solder, or, if it has not been properly applied, opens any little crevices where there has not been sufficient flux to cause it to stick. The faulty performance of rubber hose when conducting hot water, is too well known to require comment, and the destructive action of hot water on rubber makes the use of such hose costly.

KEEPING TABS ON THE CHAUFFEUR

Canadian Owner's System for Keeping His Car in Condition—Making the Chauffeur His Own Checker.

What is admittedly the most uncertain factor incident to motoring in its present day phases, is the human equation of the chauffeur. No matter how competent and skilled a man may be, there is always the harrowing suspicion in his employer's mind that he may be neglecting some little attention which the car requires, that he may be "faking" repairs, or that he may be using the machine for his own purposes, out of hours. Most well-ordered garages have systems designed to eliminate this uncertainty as far as possible by checking the cars in and out, and generally giving an account of the doings of the various drivers on the boarding list. Such systems have their faults, however, and are not always carried out with the integrity which is theirs nominally. A system designed to obviate many of these drawbacks, and also to account for the condition of the car in a way which a verbal report cannot do, has been originated by a Canadian motorist with the purpose of maintaining a continuous and practically automatic record of the condition of the machine and cost of its upkeep at all times.

The system involves the use of a specially prepared blank, printed on an envelope and intended to be filled out every morning before the car leaves the garage, and presented to the owner as he takes over the car for the day. The blank contains a complete report as to the condition of the machine. Within the envelope are placed receipts for any supplies or parts which may have been purchased during the previous day. No accounts are to be charged, and the enclosed vouchers furnish a complete record of all outstanding expenses current. Any repairs or supplies required are listed on the reverse side of the envelope, so that expenses due are accounted for as well. The questions appearing on the blank are in the following form:

Date..... Hour.....M
Mileage register? (total miles).
Trip register? — miles. (Move to zero every morning).
Miles driven yesterday?
Is clock working properly? — minutes slow—fast.
Is speedometer working properly?
About how many gallons of gasolene in car?
Are spark plugs clean and engine working properly?
Is right rear tire properly inflated?
Is right forward tire properly inflated?
Is left rear tire properly inflated?
Is left forward tire properly inflated?
Is tire repair outfit including pump complete?
Is there an extra rear inner tube in tonneau?
Is there an extra forward inner tube in tonneau?
Is rear lamp trimmed and filled?
Are front oil lamps trimmed and filled?
Are acetylene lamps in good order?
Is acetylene lamp generator filled with carbide and water?
Mention any tools broken or missing?
Is Gabriel horn working properly?
Is engine oil can in back of car filled?
When was car washed last?
When was brass work polished last?
Mention on back any repairs or attachments needed, damages done to car or matters which owner should be informed of.
Mention on back any supplies, gasolene, etc., bought since last report was made (enclose receipts for bills paid). Do not have any bills charged.
Questions that can be answered "yes" mark opposite * .

It will be seen that most of the answers will be in the affirmative so long as the car is in good working condition, so that the status of the report ordinarily will be merely that of a certificate of inspection. The items referring to the condition of each of the tires individually, are of no mean importance, while the items relating to the mileage of the previous day, both by total and trip records, put an effective check on the use of the machine.

The idea was originated by Morris P. Bryant, of Montreal, a member of the Automobile Club of Canada, for his own use. There are no superfluous queries," says Motoring, in regard to it, "and the instructions to 'mention on the back of the report any matter which the owner should be informed of,' gives the chauffeur plenty of scope for suggestions, while it leaves no excuse for omissions."

Care in Manipulating Planetary Gear.

Although it is generally supposed that less skill is required in the manipulation of the common planetary change gear than is demanded by the sliding pinion type, the fact remains that unless the former system is handled with good judgment, not simply the gearset, but the entire transmission, and even the motor, will suffer greatly. The point is that it is rather difficult to determine the exact point at which the low gear should be abandoned for the direct drive, when starting from rest, or finishing a hill-climb. If the use of the low is carried too far, the resultant grinding of the gears is in itself sufficient indication of the heavy burden which is being thrown on the very small parts, which at their high rate of speed, are apt to be worn very rapidly, and even to chip, if too hard. If the high gear is applied before the car has attained sufficient momentum, on the other hand, the effect of throwing a sudden overload on the engine is apt to be even more serious.

All Metal Piping for Cooling System.

All-metal piping, with screwed connections is most desirable for use in the cooling system. Where for any reason, flexible metal tubing cannot be employed, sliding joints may be supplied at the points of flexure.

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HOW ONE MODERN NIMROD HUNTS

Colorado Motorist Scales High Points of the Rockies in Pursuit of Game—Big Bag for Three Hours.

While automobiles occasionally have been employed in hunting expeditions, the use for this purpose generally has been confined to a day's outing or for some special occasion, M. C. Ramsey, an enthusiastic motorist of Grand Junction, Colo., has varied the usual proceedings in this connection by making extended hunting trips through the Rocky Mountains in



M. C. RAMSEY DRIVING HIS RAMBLER OVER HIGH POINT IN THE ROCKIES

a single cylinder 1904 Rambler which, in all seasons of the year and under all road conditions, he drives on long hunting excursions into the mountains after game. Early in 1908 Ramsey made a hundred mile run up the western slope and reached the highest point of the Rockies yet attained by an automobile, which shows Ramsey driving his care over this highest point on his rugged route. The accompanying illustration shows the sort of road conditions he encountered when near the end of his journey. On this occasion he returned to Grand Junction with 78 rabbits as a result of three hour's shooting.

Motor League of Rhode Island Organizes.

The Motor League of Rhode Island has been organized with the following temporary officers: President, George H. Huddy, Jr.; secretary, Joseph S. Gettler; treasurer, George C. Darling. The objects of the organization, which is to be incorporated, are to secure the enactment of just laws governing the use of the highways by all vehicles; to secure the betterment of road conditions; to promote the building of good roads; to place guide-boards, warning signals and road directions; to remove visual and other obstructions, and to secure appliances and means of safeguarding railroad crossings and dangerous points in the highways. The organization also seeks "to promote such social relations between the members of this corporation and between this and other similar organizations as may be deemed desirable." The dues will be $10 a year.

White Cars Resume Presidential Service.

Despite keen competition on the part of other automobile manufacturers, on the return of President Roosevelt to his summer home on Saturday, the two government White steamers resumed service at Oyster Bay, the "summer capital" of the nation. The two cars are now operated on the same schedule as last year, making the first trip to Sagamore Hill at 7 in the morning and the last trip after midnight. There is but little time during the day when the cars are not engaged on some official mission. Last season, the two cars went through the four months season with a record of never having missed a trip and never having been late.

Few Starters in Albany Club's Tour.

Though 20 entries were expected for the fourth annual tour of the Albany (N. Y.) Automobile Club, only six cars actually left the capital city on Saturday last, 20th inst. The cars went direct to Greenfield, Mass., and from there to Providence, R. I., New London, Conn., and arrived in New York last evening (Wednesday). Of the six starters two have dropped out; the four contestants will leave New York to-day for Albany, over a route which will lead through Waterbury, Conn. The tourists are due in Albany to-morrow. The tour is somewhat of an endurance and reliability run, and the car returning to Albany with the seal of its bonnet unbroken will be awarded the McClure Cup.

AMERICAN ENTRY IN KEEN PURSUIT

Thomas Car Nearly Overtakes the German Protos at Irkutsk—The Italian Zust Remains far Behind.

Latest reports from the cars still engaged in the New York-Paris "race" represent that the much-repaired German Protos car—which crossed a part of the American continent on a railroad flat car—arrived at Kansk, about half way between Vladivostok and Moscow, early in the morning of the 23d inst. The run from Irkutsk, 532 miles, was made in 45 hours, or better than 266 miles per day. The car was equipped at Irkutsk with a powerful searchlight, shipped from Berlin for its use, and which enables it to travel as well by night as by day.

Lieutenant Hans Koeppen, conductor of the Protos car, who announced his arrival at Kansk in a dispatch to the Zeitung am Mittag of Berlin, announced that the American Thomas car was 24 hours behind him at Irkutsk. Reports from Paris, however, represent that the American car started only nine hours after the German car, in pursuit of it. The Thomas, according to reports from the correspondent on that car, nearly caught the Protos at Irkutsk, and in fact was up with the Germans on the eastern shore of Lake Baikal, but with only four minutes in which to load the car on the freight train that carried the Protos across the lake. Accordingly the Americans, having thus cut down a lead of two days gained by the Protos, had to stand and see the train pull out with the Germans on board. They took the next freight train to catch the evening steamer and reached Irkutsk about two hours after the German car had left that place.

The run from Irkutsk to Paris in the Peking-Paris race was made by the Itala car in forty days' actual running, or an average of 175 miles per day. The road conditions are generally good and if the Protos and Thomas cars maintain equally good speed they will arrive in Paris before the first of August.

Nothing has been heard at Berlin concerning the Italian Zust car since a St. Petersburg report of the 19th inst., when that car was said to be at Harbin.

Erle Winner of Prince Henry Cup.

Cable advices state that Fritz Erle, of Mannheim, proved the provisional winner of the contest for the Prince Henry touring cup, which ended at Frankfort-on-the-Main, Wednesday night, 17th inst. Of the 130 machines which made the start from Berlin on the 9th inst., 112 finished. The official lists, showing the actual winner, are yet to be made public. The large majority of the cars participating were of German make, but ten Belgian drivers, nine French and a few of other nationalities started.

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Depot Lane Hill for Climbing Contest.

One of the big New York newspapers scored a great "scoop" and Tuesday last! It told the world that the Riverside Motor Club will, on July 8, hold a hill climbing contest on Depot Lane Hill, a short, steep, narrow grade with two sharp turns, almost right angled turns, which leads from Lafayette boulevard to Fort Washington avenue—a grade such as will justify a verdict of the manslaughter which the contest invites. There are to be contests for every type of car, not excepting taximeter cabs carrying four passengers. The newspaper which heralded the "scoop" failed, however, to remark the real news of the affair, i. e., that such an organization as the Riverside Motor Club actually is in existence in New York City. It is probable that it "grew" over night and has its habitat in a press agent's hat. It is not likely that the "club" will send his picture to the press.

Silver Trophy for Breaking Speed Law.

Chanslor & Lyons, of Los Angeles, Cal., have offered a perpetual incentive for law-breaking—a silver trophy bearing their name, on which will be inscribed the names of all who break the record from Los Angeles to San Diego and return, a distance of 320 miles. At about the same time as the announcement of the offer of the trophy was made, L. B. Harvey was gathered in by a posse of armed sheriffs at San Luis Obispo, while engaged in shattering the San Francisco-Los Angeles record. The police of several other towns had tried to stop him, but he dashed past them, but finally was headed off by the aid of the telegraph.

California Cops to Lasso Scorchers.

In certain parts of California the lariat is to be used for the purpose of "roping" chauffeurs, much in the same manner as horses or cows are captured. By an order issued by Chief of Police W. I. Beggy, all mounted patrolmen in San Francisco are directed to carry lariats ready for use, and the policemen are instructed to lasso chauffeurs who break the speed law and do not halt when commanded to do so. To the uniniatiated it seems that considerable skill would be required to send a rope whirling through the air in such a manner that it would find a way to get underneath a cape top or limousine bonnet and encircle the body of an offending driver.

Saturday an Automobile Sabbath.

Under the recently enacted amendment of the motor vehicle law of Nova Scotia the municipalities and counties of that province are passing ordinances fixing certain periods when the operation of motor vehicles is prohibited. For example, the local authorities of Yarmouth have prohibited the running of automobiles on the city streets between midnight on Friday and the same hour on Saturday of each week. Violation of the ordinance is punishable by a fine of $20 for the first offense, $30 for the second, and $50 for the third. The prohibition is intended to assure the safety of country people who flock to the town on business at the end of the week.

Utilitarian Progress in Motor Vehicles.

Progress in the commercializing of the motor vehicle is more rapid than might be supposed. As illustrating the breadth of utility covered by its special applications, may be mentioned two instances which have come to notice recently. In one case, a machine had been designed for use as a cotton gatherer, and was intended to be run through the field between the rows, automatically packing the cotton into a receptacle in the body. In the other an original form of street sprinkler was combined with a self-propelled running gear, also of original design.

Automobile Line for Bradley Beach.

James H. Bradley, who founded Asbury Park and when that seaside city grew beyond his control, went farther down the Jersey coast to establish the new resort known as Bradley Beach, purposes adding an automobile line to the attractions of the place. It is to carry passengers between Fletcher Lake and Avon for a nominal fare of five cents. Whether the line will pay for itself or not is no factor in the proposition, the main idea with Mr. Bradley being to add to the pleasure of summer visitors.

Hoodoo Car "Sold for a Song."

Almost as good as winning it in a lottery is the acquisition of a four-cylinder 20 horsepower touring car for the munificent sum of $58.79. Yet this is the sum for which Gustavus Boyd, president of the Columbus (Ind.) Machine Works, became the possessor of an automobile of the afore-mentioned description.

According to the tale told by the Columbusites, the machine has a hoodoo somewhere about it, which has not yet been routed out. The known history of the car is as follows: A few months ago a man came to Columbus with the car, which he left at the garage of a Columbus Machine Works. He wanted it to be overhauled and put in condition. The bill for the job amounted to $58.79. Days, weeks and months passed, but no one came for the car. Mr. Boyd was anxious to find the owner, but could not do so. Finally the machine company decided to have the sheriff sell the car at auction. This was done, but nobody would bid over $50. Then Mr. Boyd bid the amount of the repair bill and took the machine. It is said that this is the machine which went over the edge of a bridge into the Chicago river some time ago and killed four of its passengers.

Skippack Hill for Norristown Climb.

Skippack Hill, on the Reading pike, five miles above Norristown, Pa., will be the scene of what likely will prove a notable hill climbing contest on June 27th, the Norristown Automobile Club having secured permission from the authorities to use the hill for that purpose on that date. The hill rises 347 feet in 6,270, and as the surface is of fine macadam without a water break or obstruction of any kind, some fast time may be expected. The meet has been sanctioned by the American Automobile Association.

Automobiles to Race at Virginia Fair.

One day of the Virginia State Fair at Richmond, October 5-11, will be devoted wholly to automobile sport. Dr. H. W. Bassitt, chairman of the Richmond Automobile Club's racing committee, will have charge of the program.

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STRUCTURE OF EXIDE BATTERIES

Bruce Ford Sheds Light on It for the Non-Technical—Also Gives Points to Car Builders.

Storage batteries are more or less a thing of mystery to the average motorist, even though he be the owner of an electric vehicle. In a paper to be read to-day before the Society of Automobile Engineers at its Detroit meeting, Bruce Ford gives an account of the structure of the well-known Exide batteries, which cannot fail to be enlighteinng to the non-technical, while he also mentions a number of points which are well worthy the attention of the manufacturers of vehicles employing storage batteries for one purpose or another.

Originally employed only for purposes of propulsion, storage batteries have now come to be used also for a variety of other purposes, such as ignition, lighting and combinations of the two. The principle of construction is the same in all cases. Differences in purpose, however, entail slight differences in construction, such as are noticeable in the case of the two classes of battery used in propelling pleasure and commercial vehicles. As being the more common, the bulk of the paper is devoted to batteries of the latter two types.

"In design," says Mr. Ford, regarding the structure of the battery, "the positive and negative plates are similar, the positive grid, however, being thicker and heavier that that for the negative plate. The standard grids are 7-32 inch and 3-16 inch thick respectively. The grid consists of a frame around the outside of the plate, having vertical bars throughout the body of the plate spaced about ¾ inch apart and which extend from its top to its bottom edge. There are horizontal rods of very small section flush with the surface of the grid and spaced about ¼ inch apart on each side of the plate; the rods on one face of the plate are not placed opposite those on the other face, but midway between them, or in staggered relation. It is thus seen that the body of the grid contains open spaces about ¾ inch wide, which extend from the top frame to the bottom frame and are enclosed by the horizontal facial rods; these open spaces are filled with the lead oxide paste, which, when in position, sets like cement in the form of a pencil about ¾ inch wide, held in its position between the vertical bars and between the facial horizontal rods. The plates, after being pasted and the paste allowed to set, are given an electro-chemical formation, during which the paste or active material of the thicker plates becomes peroxidized, making them positive plates, while the active material of the thinner plates becomes reduced to porous, spongy metallic lead, making them negative plates. . . . .

"The plates are made of different sizes, but the two sizes most used are the MV, 8⅝ inches high by 5¾ inches wide, and the PV, 8⅝ inches high by 4¾ inches wide. The MV is rated at seven amperes per positive plate for four hours, and the PV at six amperes for four hours; a sufficient number of cells are connected in series to give the required voltage. Each cell consists of a rubber jar, an element and electrolyte. The rubber jar consists of a deep rectangular box of hard rubber, with walls ⅛ inch thick, more or less, according to the size and service. In the bottom of the jar, and made integral with it, are bridges or ribs of height consistent with the service and whose function it is to support the weight of the element and to provide space into which is deposited the sediment thrown off by the plates with wear.

"The element consists of positive and negative plates burned to straps and kept apart by separators interposed between the positive and negative plates. In assembling an element, a negative plate is laid down with a separator, on it, then a positive plate, separator, negative plate, and so on. The plates are so placed that all the lugs of the positive plates are on one side and all the lugs of the negative plates are on the other side. A strap, consisting of a flat strip of lead or lead alloy having retangular openings in it of the same dimensions as the cross section of the lug of the plates, these openings being spaced to register with the lugs, is then placed over the plate lugs of the positive plates, and a similar strap is placed over the lugs of the negative plates. The lugs are then burned into integral union with the straps. In pleasure vehicle service it is customary to make the plate lugs comparatively short, so that the straps are somewhat below the top of the jar, and a cover consisting of a rectangular piece of hard rubber is placed on top of the straps which are furnished with projections extending through holes in the cover and by which the cells are connected by burned joints. In commercial service the batteries are usually assembled with top straps. . . . .

"The separator, which has proved by experience to be the most successful, consists of a piece of wood veneer with parallel grooves about ¼ inch wide, spaced close together and plowed out of one side, the plain sides being placed directly against the faces of the negative plates. A thin sheet of perforated hard rubber is placed against the grooved side of the wood and rests against the face of the positive plate; this perforated rubber performs a double function, in that it protects the wood from the oxidizing action of the positive active material and also tends to restrain the wearing action of the wash of the acid on the active material of the positive plate. The grooves of the wood separator are arranged vertically, and there is thus a number of free channels for circulation of the acid and for the escaping gases liberated during the action of the battery, especially toward the completion of charge. The wood of which the separators are made is given a chemical treatment to remove substances contained in natural wood, which would otherwise do great damage to the plates. . . . .

"The cells are filled with electrolyte, which consists of a mixture of pure sulphuric acid and pure water, with a specific gravity of about 1.210. After the battery is fully charged the specific gravity reads about 1.280; the reason for this rise in gravity is that the negative plates before leaving the factory are given a slight sulphating treatment to prevent their oxidation; in giving the battery its initial charge the sulphate is reduced to spongy metallic lead, giving sulphuric acid to the electrolyte, which raises its gravity.

"In pleasure vehicle service it is customary to enclose the cells with a tight-fitting rubber cover resting on the plate straps slightly below the top of the jar, and to seal the joints with sealing compound, placing a rubber plug in a hole in the center of the cover for filling cells with water to replace evaporation, the plug being supplied with a small hole for the escape of gases. In commercial service, covers are often dispensed with altogether, as the batteries are usually in service a greater proportion of the time and require filling and inspection much oftener. . . . . From 40 to 42 is the largest number of cells that it is customary to use, as more than this number cannot be charged in series from a 110-volt lighting circuit, and, without special and inconvenient apparatus, it is bad practice to charge batteries in parallel. . . . .

"The durability of a battery not only depends upon pure materials and uniformity of methods in manufacture, but also upon the care which it receives in operation. A battery could be ruined in half a dozen discharges by sufficient abuse, whereas, with good treatment the same battery might have run for several hundred discharges. . . . .

"The life of a battery with pasted plates is normally limited by life of the active material of the positive plates, which with each charge and discharge become more soft and loose at the surface, gradually washing out. As this washing out depends chiefly upon the number of charges, and, within usual limits, is practically independent of the strength or duration of the discharge current, it may be readily seen that statements of life expressed in time, or total mileage, are apt to be misleading. . . . .

"Demands are made from time to time for a battery having a greater capacity for unit of weight. It is an axiom in storage battery work that greater capacity for unit of weight means decreased durability. The simplest way to increase capacity with the same weight, is to fill the plates with a more porous paste. This results in a paste which, with use, becomes softened up and washes out more rapidly, and is not considered good practice. The preferable method is to make the plates thinner and put more of them in each cell. A plate of one-half the

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thickness will not have the same capacity as a plate of standard thickness, but it will have more than half the capacity. . . . . The life, expressed in number of discharges, is naturally less in the special thin plate combination. If, however, the full capacity is taken out on each discharge, the life in ampere hours, or, in other words, the mileage obtained, would be about the same as with standard plates fully discharged each time.

"The aim in the design of the Exide cell is to produce the greatest watt output per pound at the 4-hour rate of discharge, consistent with durability. The straps and plate lugs are not only designed with reference to mechanical strength, but also are made of cross section consistent with drop in voltage, to give the maximum watts per pounds at the cell terminals. In the vehicle battery this is a most important feature. There are many cases where the vehicle manufacturers could give advantageous consideration to the drop in conductors. An Exide cell discharging at the 4-hour rate is giving, roughly, two watts per pound of cell. In ordinary cases the most economical size of wire to use for the conductors would be that which would give a loss per pound nearly equivalent to the output per pound of battery; or a conductor loss of about two watts per pound of wire, since the number of watts per pound should be a maximum at the motor terminals and not only at the battery terminals.

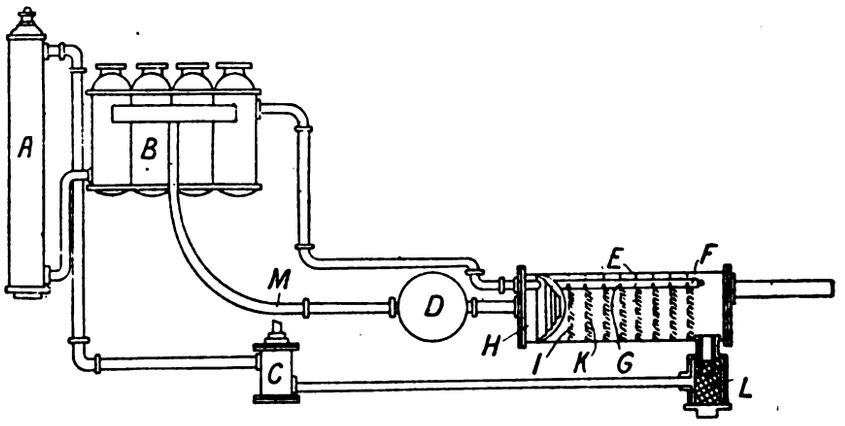
"There are probably many cases where the addition of a pound to the wire or to the controller contacts would save three watts or more at the motor terminal. It would seem that aluminum is a metal particularly well suited for wiring electric vehicles, since its weight for the same conductivity is much less than that of copper. By using aluminum conductors it would, therefore, be possible to reduce the weight and also to reduce the total loss in conductors both together. . . . . I have, however, never heard of aluminum being used for this purpose in this class of work.

"Storage batteries for the ignition of automobile gas engines have become quite an important development of the storage battery business. For this class of service it is not only necessary to have substantial and durable plates and fittings, but it is necessary that all the parts should be mounted in a compact and durable manner. Batteries for this class of work, at the present time at least, must be built for abuse. They are frequently discharged until practically exhausted, and they are allowed to stand in this condition. No battery worked in this manner can give the best results, and it is economy to take care of the batteries in this class of service just as it is economy to take care of them in other classes of service. The discharges, however, extend over long periods of time and, even when abused, after the battery has given comparatively few discharges it has had a considerable life, measured in time."

ROBS THE EXHAUST OF ITS ODOR

How the Ill Smelling Properties are Arrested by a New Foreign Invention—Simplicity of the Device.

Despite the fact that the exhaust from gasolene motors continues to be more or less obnoxious, very few complaints are heard of the offense which it causes, even in the closely congested city streets. Time was, not long since, when a number of propositions for alleviating this nuisance were suggested, while a couple of years or so ago, considerable publicity was given to the plan of a foreign inventor for perfuming the exhaust. That the idea still finds its adherents, however uncalled for it may appear with the present good design of the average motor, is shown by the recent introduction in England of an exhaust deodorizer. This system is the invention of Messrs. W. R. C. Wakley and R. Parsons, and is being marketed by Deas & Co., of London.



In principle, the system involves the use of a scrubber, in general arrangement not unlike those which are used for freeing coal gas from its tarry ingredients before completing its preparation as the ordinary illuminating gas of commerce. That is to say, the exhaust products from the motor are passed through a special form of filter over which a constant stream of water is passed, the result being the removal from it of a large proportion, if not of the entire amount of the sooty and tarry residue of combustion. The remaining vapor, in its cooled and filtered condition is permitted to escape in the usual manner, while the residue is washed into a receiver where it is entrained until removed during a periodical cleaning.

The apparatus required to complete this process is astonishingly simple. As shown in the accompanying illustration, it comprises merely the attachment to the usual discharge pipe from the muffler of the deodorizing tank or scrubber, which also is included in the return lead of the water cooling system of the motor. The entire circulation of cooling water is carried through the device, and no other special provisions are required.

The arrangement of the radiator, A, cylinders, B, water circulating pump, C, and exhaust pipe and muffler, M and D, are plainly marked in the illustration. The exhaust entering the deodorizer, E, meets the deflector, H, by which it is spread out into a thin and uniform spray over the entire section of the chamber. It immediately impinges against a series of gauze screens, M, which are backed by wicks, K, of asbestos or cocoanut fibre. After passing these filtering layers, the remaining gas passes off through the outlet shown at the right. The return from the water jackets of the motor, enters the device through the spray pipe F, which distributes a fine spray throughout the chamber, and keeps the wicks and screens continually cool and moist. The overflow, carrying the impurities which have been washed from the gases, is drained into the sump, L, where the water is filtered before being returned to the circulating pump.

In practice, it is said that this system has given surprisingly good results. A deodorizer applied to one of the motor omnibuses of the London Road Car Co., worked so thoroughly that even when the motor was over-lubricated purposely, the exhaust discharged was only a white vapor which proved to be entirely free from odor. Again, as applied to a private touring car, and tested by the owner, even when adjusted to the conditions generally supposed to contribute to an obnoxious exhaust odor, it was possible to hold a sheet of white paper close to the discharge orifice without staining it.

Were any material complication involved in its design, or any expense or trouble attended its use, it would hardly seem practical to consider the purification of the exhaust, even in town car practice. If so much can be done by the simple use of the cooling water in such a way as has been described, however, the idea would seem to be well worth considering with regard to its applicability to car design.

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VARIATIONS IN VALVE TIMING

Table Showing Systems Adopted by Different Makers—Useful for Both Repairmen and Owners.

Because of the considerable variation in the methods of valve timing adopted by the different makers, repairmen as well as owners, frequently become not a little embarrassed in resetting the valve gear of a motor which has been dissected without the precautionary measure of first taking note of the proper arrangement of the actuating mechanism. Such a contingency seldom arises where ordinary precautions are taken, but the bare possibility of such an event, as well as the necessity of knowing the timing when remodelling an engine, or replacing parts of the valve gear in a machine which has been smashed in an accident, make it a great convenience to have the required data at hand for an emergency.

With this object, two foreign papers, the Motor-Car Journal, in England, and Omnia, in France, have been publishing a series of articles giving the timing of the most commonly known motors of their respective countries. The accumulated results, are given in the accompanying table, which should prove a useful piece of memoranda for those who have to deal with engines made abroad. An interesting point which is observable in this connection, is the extreme divergency of settings used. As the valve setting is regulated in large measure by the area and contour of the ports, as well as their location, and even the size of the valves, this diversity in practice abroad, indicates very clearly the lack of conformity to standards, which prevails.

Attention should be called to the distribution effected by means of the Larrad Timer. Although listed as a motor, this device, which was described in the Motor World not long since, is nothing more nor less than an attachment, which may be applied to any engine, and which is intended to facilitate the setting of valves and ignition mechanism. Furthermore, it is intended to establish a uniform setting for all motors to which it is applied, its constructors avowing that the arrangement which it secures is not simply applicable to all motors, but further intimating that its use would be beneficial when applied to motors the timing of which was not in conformity with it. How great a change this would effect in the distribution of several well known engines, as well as the probable consequences of using it is readily seen.

Motor.	Inlet Valve.		Exhaust Valve.	
	Opens.	Closes.	Opens.	Closes.
Albion	10° late	20° late	48° early	8° late
Ariel	18½° late	42° late	45° early	5° late
Aries, 14-18 h.p.	18° late	44° late	58° early	13° late
Arrol-Johnston, 24-30 h.p.	20° late	20° late	35° early	5° late
Aster (high speed)	4 mm. late	18 mm. late	15 mm. early	dead center
Aster (low speed)	1 mm. late	1 mm. late	15 mm. early	dead center
Berliet, 22 h.p.	17° late	38° late	48° early	9° late
Brasier	7° late	25° late	45° early	dead center
Brouhot, 12 h.p.	20° late	45° late	45° early	dead center
Charron, 20-30 h.p.	1° late	dead center	44° early	dead center
Chenard-Walcker	dead center	36° late	36° early	dead center
Cornilleau-St. Beuve 20-30 h. p.	20° late	20° late	56° early	6° late
Cottin-Desgouttes, 18-22 h. p.	15° late	30° late	46° early	8° late
Darracq, 10-12 h.p.	dead center	30° late	48° early	dead center
Daimler	15° late	25° late	35° early	5° late
Deasy	10° late	5° late	30° early	5° late
Dennis, 28 and 35 h.p.	30° late	20° late	40° early	10° late
De Dion, 12 h.p.	dead center	45° late	45° early	dead center
Fiat	dead center	dead center	45° early	dead center
Germain	4° late	35° late	44° early	10° late
Gregoire, 10-14 h.p.	5° late	dead center	53° early	dead center
Hotchkiss	17° late	33° late	44° early	10° late
Labor, 20-30 h.p.	dead center	dead center	51° 20′ early	dead center
Larrad Timer	17° late	17° late	52° early	22° late
Motobloc	11° late	11° late	45° early	5° late
Mutel	26° late	21° late	62° early	28° late
Panhard, 15 and 18 h.p.	1-16 in. late	3/8 to ½ in. late	3/8 to 9-16 in. early	1-16 in. late
Panhard, 24 h.p.	1-16 in. late	½ to 5/8 in. late	½ to 11-16in. early	1-16 in. late
Panhard, 8 and 10 h.p.	automatic	automatic	3/8 to ½ in. early	1-16 in. late
Peugeot, 18-24 h.p.	10° late	18° late	58° early	dead center
Rochet-Schneider, 24 h.p.	20° late	20° late	40° early	dead center
Renault, 8 h.p.	23° 30′ late	26° late	32° early	10° late
Rossel, 40 h.p.	2° late	23° late	38° early	dead center
Star	dead center	dead center	40° early	dead center
Straker-Squire C. S. B.	20° late	20° late	56° early	6° late
Thornycroft	35° late	15° late	41° early	13° late
Vauxhall	30° late	24° late	36° early	15° late
Vinot, 12-16 h.p.	15° late	15° late	30° early	dead center
Unic, 20 h.p.	34° late	40° late	53° early	10° late

MUST SUE CITY FOR PAYMENT

How What Looked Like "Easy Money" Wasn't so Easy as It Looked—Dispute Over a Municipal Purchase.

Municipal ownership as it relates to motor cars occasionally develops some unusual phases, as one of the manufacturers who sold the car to the city of New York has discovered. The money obtained from the sale of such cars is not always such "easy money" as it appears to be.

According to reports that are given credence in various city departments, the company who furnished the car in question was accused by the comptroller's office of not alone supplying the municipality with a second hand vehicle but with attempting to collect for it a sum in excess of the amount for which private individuals could purchase it; the manufacturers charged $3.500 for the car to the city, and the finance department claimed that the same model could be bought for $3,000.

A representative of the makers appeared before the comptroller and denied that the car was second hand, while admitting that it had become shopworn and that the upholstery had been replaced owing to its having become moth-eaten. He further stated that $3,500 was the lowest price at which anyone could purchase this model of car.

About this time the makers of the automobile received a letter from a prospective purchaser asking a quotation on the same type of car as the one under discussion. They responded and quoted $3,250, to which the prospective purchaser replied that the price was absurd as the firm had sold one car—he named the buyer—for $2,750. The manufacturers admitted that this statement was true but said that only one car had been sold at that figure.

In the meanwhile the heads of other city departments were interviewed and it was learned that this same model car had been offered to them for $3,000. The various statements concerning the assortment of prices at which the car had been offered, was then forwarded by the city authorities to the manufacturer, who replied that the statements were not true and that the only price of the car in question was $3,500 and that this price was strictly maintained, the only exception to it being in the case of the person who had bought one for $2,750. The city, however, is not satisfied and having refused to pay the bill, the question will be left for the courts to decide.

Gasolene Cost High in Spain.

A quantity of gasolene which costs 20 cents in the United States is sold in Spain for $2. In the latter country the cost of automobiling is as high as in any country of Europe.

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COAL TAR AND PITCH FOR ROADS

Highway Commissioner Macdonald's Specification for Binder Material—Successfully Tested in Connecticut.

Coal tar and pitch combined as a binder in building macadam roads has been tried with such success by Highway Commissioner Macdonald, of Connecticut, that he has been invited to read a paper on the subject at the International Road Congress in Paris next fall. He has worked out a specification for the use of these materials and it has been adopted by a number of other highway commissioners. Something over a year ago Commissioner Macdonald chose a very hot day and laid his specification on most of the roads in Bushnell Park about the Connecticut State capitol in Hartford and the present condition of these roads, which is as good as the day the coal tar combination was put down, testifies to the excellence of the specification. Not only that, but these roads are unusually good ones on which to try out the coal tar for the reason that they are used by automobiles far more than by any other vehicles.

It happens that before he became State highway commissioner a dozen years ago, Macdonald had been for years at the head of a New Haven firm which laid, and still lays, tar and asphalt pavements, and he was peculiarly fitted to grapple with the destructiveness of automobile tires on macadam roads when it became a question of seeing the fine system of roads in Connecticut which he is building disintegrate before his eyes unless he could find a protection for them. There were two things to be done, find a road-surfacing material which is finished when laid and solid, so that it makes no dust and needs no dust to maintain its integrity, or find a method of laying the dust. Some roadmakers have not given over trying to find the latter yet, but after various and varied experiments, Commissioner Macdonald finds that a mere dust layer—which means oil, is of little value. It must be frequently renewed and cannot be repaired.

Commissioner Macdonald's specification lays great stress on the necessity for having all parts of the road perfectly dry when the coal tar and pitch surfacing is laid. After the shoulders and gutters have been formed and shaped the contractor must clean off all dirt or accumulations with split rattan brooms or a horse sweeper, until the No. 2 stone is entirely bare, clean and free from all material except such as is found in the No. 2 course, so that there is no interruption between the tar and the No. 2 course of stone. This No. 2 course is to be evened up to grade, also.

Then comes the coal tar application. About 15 per cent. of pitch is to be melted into the tar and thoroughly mixed with it, the whole to be heated to a temperature of 225 degrees. At this temperature the mixture is flooded onto the road and broomed in with split rattan brooms. When this first application has become entirely absorbed, a second application of exactly the same thing is to be applied in just the same way, the two making a perfectly solid surface on top of and in combination with the No. 2 course of stone, which is about one inch, longest diameter, in size.

While the second application is still hot and sticky, the top dressing of trap rock splinters from one-half to three-quarters of an inch, longest diameter, is put on to a uniform depth of not less than an inch. Two inches will be even better. At once a steam road roller of not less than ten tons' weight is to be run over the surface of this, and to be kept running over it until the top dressing is thoroughly imbedded in the tar and pitch composition. Then the road must cool thoroughly before any use whatever.

There are several important conditions which must be observed, too, chief among them, perhaps, being the requirement that the day must be hot. "No water gas tar will be allowed to be used, nor any adulteration of the coal tar. Nothing but pure coal tar shall be used in the work." In several different ways the necessity for the day to be hot, the road to be dry and clean and only new and fresh stone from the quarry, free from dust, are emphasized.

What Lightning Did to a Car.

Probably all motorists who have had the experience of driving during a thunder storm have been conscious of more or less nervousness because of the vague possibility of lightning striking the mechanism. Strange to say, however, instances in which this has occurred are practically unknown. One of the few on record was the fate of an English owner who was caught in a severe storm while crossing an elevated and unprotected plateau in Sussex. The car was in an exposed position, and no shelter was available when the storm reached its climax.

"One flash was blinding," says the author of this experience, "followed by a smell of burning, and three out of the party of four got out of the car. We lay down on the ground by a little heap of hay, and it was like one imagines it must feel to be in the midst of bursting shells or bombs. We could almost feel the storm touching us. When it was over the car would not go properly, and we found that the insulating wires had evidently been struck by the lightning and the rubber was melted as if it had been in a furnace; moreover, we carried three accumulators, and the two spare ones, had been completely discharged by the action of the lightning."

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

UP-TO-DATE HIGHWAY ROBBERY

One of the Tricks Whereby Automobilists are Made to "Stand and Deliver"—Its Unlawful Aspect Shown.

What was supposed to be a trap designed to aid the "shaking down" of automobilists was encountered a few days ago near Niantic, Conn., by Hiram P. Maxim, of Hartford. A lot of mud and rubbish placed in the roadway, ostensibly for road repairing, suggested the possibility of a stalled automobile and a farmer with his ox team on hand, ready to "pull her through" for a consideration. Mr. Maxim, who was accompanied by one of the judges of the Superior Court, had no inclination to assist in buying fodder for the cattle, but by sheer force of bucking through the mud escaped the shakedown. On his return to Hartford he took steps to have the matter looked up by reporting the case to Schutz & Edwards, attorneys for the Automobile Club, asking for a legal opinion on such traps. Mr. Schutz sent the following reply:

"Dear Sir: Replying to yours of the 25th we beg to say that for the well being of other automobilists it is most advisable than an example be made of the scheming trap setter whom you encountered near Niantic. We have examined the statutes to see whether he is guilty of a criminal offense and the following sections seem to most nearly cover the case. Section 1181 of the General Statutes provides:

"'Every person who shall, without the written consent of the selectmen of the town, place or deposit in any public highway any stones or waste material, which shall in any way impede, hinder, obstruct or interfere with the repairs of such highway, shall be fined not more than $7.'

"Chapter 53 of the laws of 1907 provides: 'Every person who shall knowingly throw or place or cause to be thrown or placed in or upon any highway or street, any nails, tacks, glass, crockery, scrap iron, wire or substances of like nature and suffer the same to remain in and upon such highway or streets, shall be fined not more than $20 for each offense.'

"As you will see these two statutes do not in terms exactly cover the case which you state, but the first one seems to us to be broad enough provided it could be shown that the 'repairer had no written consent from the selectmen.' It seems to us that the best way to bring the matter to a head is for us, as attorneys for the club, to write to the selectmen of the town of Niantic, calling their attention to the matter and informing them that if such an act is repeated, the perpetrator will be punished to the full extent of the law."

Mr. Maxim and Mr. Schutz have not as yet decided whether an attempt will be made to prosecute the Niantic trapsetter.

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The Week's Patents.

885,585. Combination Steering and Driving Axle for Motor Vehicles. James P. Carpenter, Ithaca, Mich. Filed Oct. 14, 1907. Serial No. 397,426.

1. In a combined steering and driving axle for motor vehicles, the combination with an axle having on its opposite ends socket members, of wheel spindles having on their inner ends ball members adapted to engage said sockets on the ends of the axle, anti-frictional bearing balls arranged between said ball and socket, means to lock said socket against revolution on said ball, whereby the latter and the spindle connected thereto are driven by said axle irrespective of the angle at which said spindles are turned, and a supporting yoke connected to said axle and spindle, substantially as described.

885,646. Vehicle Tire. Mary B. Priest, Milwaukee, Wis., assignor to The Priest Tire Company, a Corporation of Wisconsin. Filed Feb. 18, 1907. Serial No. 357,809.

A vehicle tire comprising a flat metal wheel rim, a one-piece pneumatic casing having inner flanges projecting from its side wall fitted to the wheel rim, rings fitted over the inner flanges of the casing, securing bolts connecting the rings and wheel rim, a flat casing tread having flange extensions projecting beyond the side walls of said casing, cross grooves in the face of the tread, a metallic band fitted to the tread, a detachable rubber tread having flanges coincident with the flange extensions of the casing tread mounted upon the metallic band, an apertured metallic side guard having flanges engaging the flanges of said detachable tread, lips extending from the apertured portion of the side guard engaging the flange extensions of the casing, and clamping bolts in connection with the side-guards fitted into the cross grooves.

885,655. Holder for Spare Tires. Edward H. Stickels, Edgewater, N. J. Filed June 16, 1906. Serial No. 322,017.

1. In a holding device for spare tires, a fixed member, a movable member slidable on the fixed member, a strap secured to and connecting the members, and means whereby the movable member will be locked to the fixed member by the tightening of the strap.

885,684. Frictional Driving Gear. Denis M. Broughton, Woodford Green, England, assignor of one-half to The British Sigarera Limited, London, England. Filed Sept. 14, 1907. Serial No. 392,830.

1. In a clutch, the combination of a shaft, a pulley mounted on said shaft and provided with a rim, a resilient strap, the tension of which is normally outward to impinge the inner surface of the rim, an arm fixed to the shaft and connected to the strap, a pivotally mounted lever pivotally connected to the opposite end of the strap, a slidable beveled member operable in the path of movement of the pivotally mounted arm to withdraw the strap out of contact with the rim.

885,704. Motor Vehicle. George J. Taylor, Salt Lake City, Utah, assignor of one-half to Alonzo E. Hyde, Salt Lake City, Utah. Filed Oct. 19, 1907. Serial No. 398,226.

1. The combination with a motor vehicle, of a rotary fan mounted thereon in position to protect the occupant of the vehicle from wind pressure, dust, etc., and means for driving the fan in a direction to protect the said occupant when the vehicle is in motion.

885,796. Pneumatic and Other Tires. Henry C. Shearman, Providence, R. I. Filed June 13, 1903. Serial No. 161,287.

1. In combination with a wheel rim and a tire having free ends, a lever with one end bearing on an approximate end of the tire and the other end bearing on the wheel rim at a point anterior to that occupied by the other end of lever when ends of tire are united or contact together in their allotted position on wheel rim, substantially as shown and described.

885,814. Selective Lever. Thomas W. Warner and Frank H. Jones, Muncie, Ind. Filed April 22, 1907. Serial No. 369,553.

1. The combination, in a selective lever, of a stationary structure embodying a segmental plate having a central slot or opening and notched flanges alongside said opening, a plurality of sleeved shafts, a sub-lever for each shaft and having a slot in its upper end, a spring operated engaging device secured to each sub-lever embodying a lug extending through the slot in the sub-lever pivotally mounted at the lower end and extending up through the opening in the segment, said operating lever having projections on opposite sides thereof respectively arranged to engage with and force back the lugs of the spring operated engaging devices on the corresponding sub-levers, each of said projections being of such length as when one of them is fully engaged with the corresponding sub-lever that the other will be free of engagement with the notch in the flange adjacent thereto.

885,822. Automobile. Arthur H. Wright, South St. Paul, Minn. Filed June 21, 1907. Serial No. 380,149.

1. In an automobile, the combination with a front and rear wheel supported truck, of upright cylinders carried thereby, pistons or plungers in the cylinders, fifth wheels supported upon the plungers and supporting the body of the vehicle, said plungers having at their upper ends ball-shaped heads embraced by sockets formed on the lower rings of the fifth-wheels.

885,842. Turn Table. Sterling Elliott, Newton, Mass. Filed July 5, 1907. Serial No. 382,140. Renewed March 11, 1908. Serial No. 420,455.

1. In a turntable, the combination of a bed casting having a circular track, a rotatable platform supporting frame also having a circular track, an interposed rotatable roller supporting frame having a plurality of longitudinally adjustable radially disposed shafts, and an anti-friction roller on each shaft which engages said tracks, substantially as described.

885,845. Vehicle Suspension. Robert G. Handy, Bay City, Mich. Filed Dec. 17, 1906. Serial No. 348,129.

1. In a motor vehicle, the combination with an axle, a body supporting frame, a strut substantially parallel to the axle and a spring yielding means supporting the frame on a strut, of a pair of obliquely crossed, independent bars in a plane substantially parallel to the axle, each articulating an end of the strut to the remote end of the axle.

885,848. Circuit Breaker for Automobiles. William C. Horner, Indianapolis, Ind. Filed May 27, 1907. Serial No. 375,963.

1. In an automobile, the combination, with the sparking circuit of an internal

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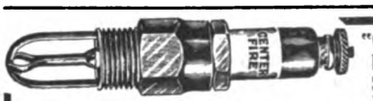
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combustion engine, of a spark timer controlling lever, a throttle valve lever, and means controlled by each of said levers for breaking the sparking circuit when either of said levers is brought to proper position.

885,860. Resilient Vehicle Tire. Harry A. Palmer, Akron, Ohio. Filed May 31, 1907. Serial No. 376,693.

1. The combination of a wheel rim, flanges adapted to be secured to the sides thereof, lugs on the inner face of said flanges, a sectional resilient tire composed of resilient sections having their sides in close contact, transverse rods or rivets extending through said sections so as to engage the lugs on the inner faces of the flanges, and loose endless rings between the tire sections embracing said rods or rivets, substantially as set forth.

885,878. Steering Rod Connection. John F. Skirrow, East Orange, N. J. Filed Nov. 4, 1907. Serial No. 400,476.

1. A steering rod connection comprising two members one of which is formed with a ball and the other with a socket to receive said ball, yieldable means within the socket to retain the ball member therein, a yieldable retainer connected to the ballcarrying member and extending around the socket member whereby the two members will be held yieldingly together and said members may have a movement with respect to each other.

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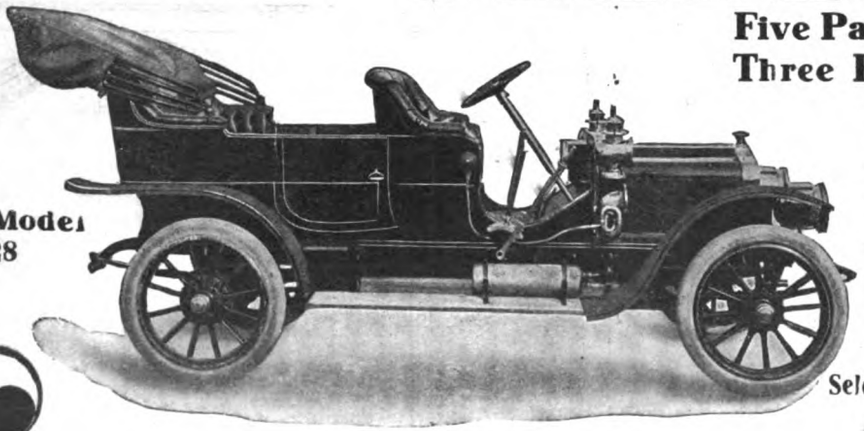
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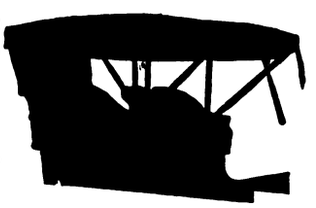
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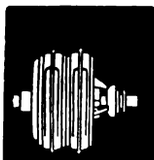
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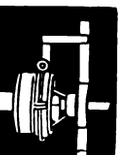
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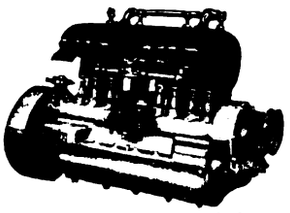
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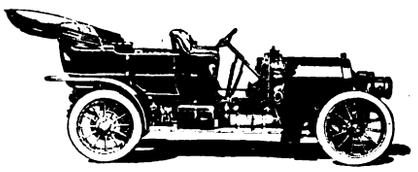
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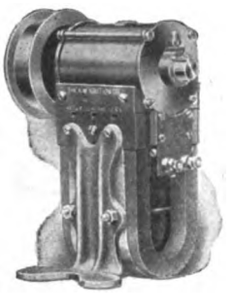
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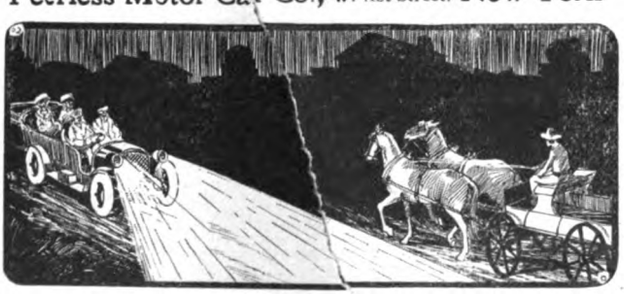
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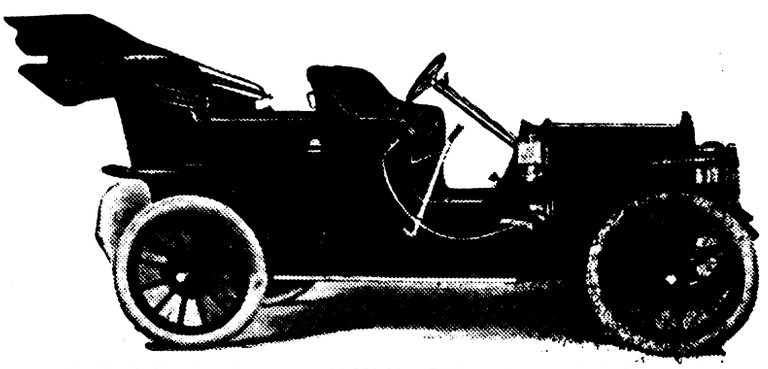
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Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

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Large Sales

make it possible for us to import **THE CELEBRATED BRAMPTON CHAINS** from **ENGLAND** (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller	$1.00 per foot.
1 x ⅝ x ⅝ roller	1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo.
202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

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Empire Tires
WEAR LONGEST

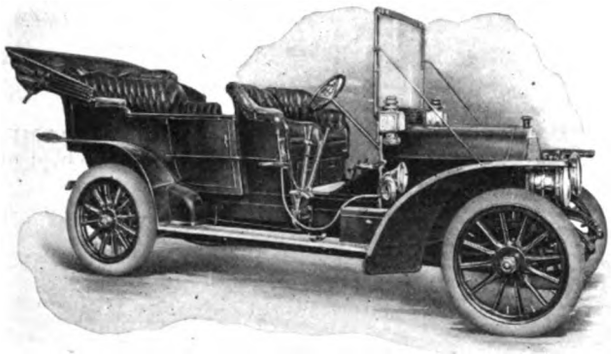
EMPIRE AUTOMOBILE TIRE COMPANY, - TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

Matheson

ONE YEAR GUARANTY

Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



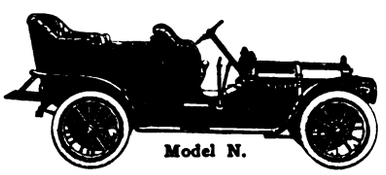
DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.
Licensed under Selden Patent.

National
Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.


Model N.

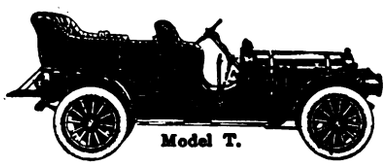
Model K - 4 cyl., 4⅞ x 5
$3,500

Model N — 4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x 4¾
$4,200

Model T — 6 cyl., 5 x 5
$5,000


Model T.

Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.
1007 E. 22d Street INDIANAPOLIS, IND.

THE OLDSMOBILE

is not only the **World's Best Car,** but one of its oldest and most famous. It gives prestige to both owners and agents.

Model M	Model MR	Model Z
Touring Car, Fully Equipped,	"Flying Roadster," Fully Equipped,	6-Cylinder, 130-inch Wheel Base,
$2,750	**$2,750**	**$4,200**

OLDS MOTOR WORKS, Lansing, Mich., U. S. A.
Members A. L. A. M.

Canadian Trade supplied from Oldsmobile Co. of Canada, Toronto, Ontario.

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"Firestone"

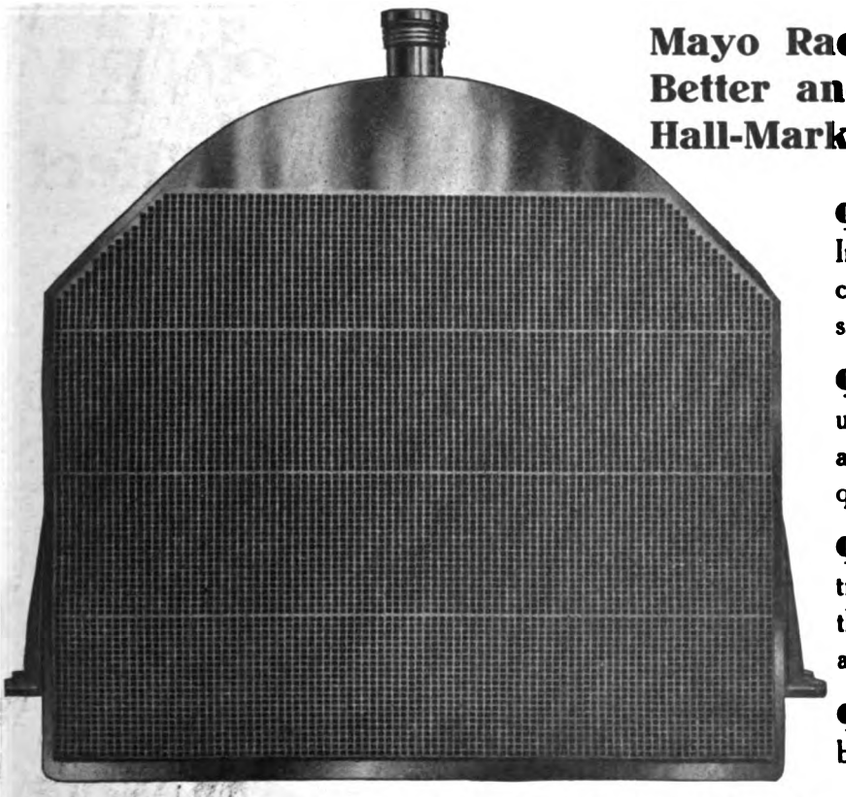
Pneumatic Tires

"THE TIRES OF STERLING QUALITY"

are today placing the highest standard for Pneumatic Tires, just as Firestone Solid Tires are the standard by which all solid tires are compared. In their manufacture they are given the very best workmanship and the closest possible inspection, insuring absolute satisfaction to the user.

WE FURNISH TIRES TO FIT ANY RIM.
Branches and Agencies Almost Everywherere.

FIRESTONE TIRE & RUBBER CO., Akron, Ohio



Mayo Radiators Make a Good Car Better and Their Use on a Car is a Hall-Mark of Quality.

¶ Mayo Radiators are made in a quality shop. In their construction no expense is spared, no crude methods obtain. In their use complete satisfaction results.

¶ Mayo Radiators perform their functions well under all conditions—and conditions at times are exacting. It is at just such times that Mayo quality asserts itself.

¶ The engineer can eliminate possible radiator troubles from his calculations by the adoption of the best possible radiator. The test of years and use has proved that we make it.

¶ Our capacity limit on new contracts is rapidly being reached.

MAYO RADIATOR COMPANY, New Haven, Conn.

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If you want good tire service and are not getting it; or,

If you believe it possible to reduce your present yearly tire bill—

a comparative test of

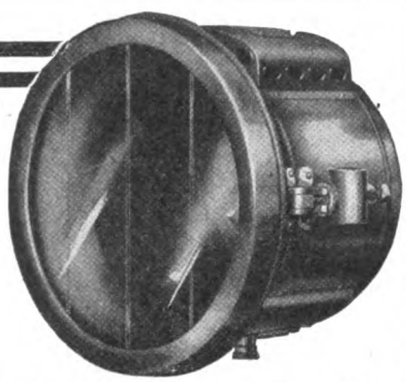
MORGAN & WRIGHT TIRES

on the same car with other brands, will satisfy you that such a result can be had—and without any extra cost over the price you pay for other tires.

YOU CAN'T DO A BETTER THING THAN TO "TRY THEM OUT"

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere



To Sum Up—

Solar Motor Lamps are superior to those of other manufacture for the following reasons:

(1) The internal method of screw assembling insures a perfectly smooth exterior. (2) All parts are interchangeable. (3) They have fewer parts. (4) Are more simple in construction. (5) Less solder is used. (6) The brass has more "body"—they are heavier and more durable. (7) They are better in design. (8) Special B & L Solar short focus Mangin Mirrors are used and each lamp is tested for accuracy of focus. The highest efficiency as regards lighting is assured.

No detail is overlooked in the construction of Solar Lamps. The Solar Nameplate is a positive guarantee to the user that he has the best in lighting equipment.

Write for a copy of our 1908 catalog.

BADGER BRASS MFG. CO.

606 Lyman Ave., KENOSHA, WIS.

Solar Lamps SHOW THE WAY

THE STEPNEY Spare Motor Wheel

ON AND GONE IN LESS THAN A MINUTE



Punctures and other tire troubles have no terrors for the motorist whose car is equipped with the **STEPNEY WHEEL.** If a tire goes wrong it is only the work of a moment to attach the **STEPNEY WHEEL** and be off again with no further delay.

Isn't it worth having, for the peace of mind alone that it brings?

Write for Catalogue D.

Spare Motor Wheel of America, Ltd.

236 Michigan Avenue, CHICAGO, ILL.

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AJAX
WRAPPED TREAD TIRES

After all is said
and done,
no matter how
glowing
the promises of
tire makers,
the only thing you have
to tie to
is
the word
of the dealer who
sells you.

If the tire
goes bad
you have the privilege
of carrying on
one end
of a controversy
with the factory—
that's all.

The tire maker
makes good—or doesn't
as he sees fit.

There's one exception—
AJAX—

Every AJAX tire
is guaranteed
for 5000 miles.

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.
BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodward Ave. — Los Angeles, 1040 S. Main St.
Agents in all large cities.

The "Maxwell"

THE RUMOR SEASON

is here again, just as it always comes with the regularity of the malaria germ, or the hay-fever, or the June-bug; only it becomes more virulent as it gets older.

The Whooper Company—so Dame Rumor says—will have a world-beater in the shape of a motor that has **more cycles** to it than you have fingers and toes, to sell at —$. Just wait and see.

The Spouter Company has something up its sleeve that will be a combination of features as variegated as the ingredients in a mince pie, to sell at — $. They will show you later.

The Holler Company has a new startler of the wait-till-we-show-you-and-get-left kind, a conglomeration of metals so diversified as to make the most enterprising experimenter in the mixer of metals quit his job in disgust, and it will sell at — $. A lick and a promise.

And so it goes on—if you have been in the business long enough you will know the story.

Not so facetious, but similar in trend, are the reflections as one scans the horizon of trade promises. I have been asked what we are going to do, and when I started to write this ad it was to give the answer:

We have found that with Maxwell principles of automobile construction and with honest manufacture and decent selling methods old terra firma is a good enough place to do business on and we are going to stay on earth, saving ourselves the trouble to come down again after the soaring flights of fancy in which some of our friends now indulge.

We are in the automobile business for the profits that are in it, and we are satisfied with the results. It pays to build the only good moderate priced automobile. Our dealers are satisfied, for they, too, find legitimate effort rewarded with a legitimate profit. Maxwell owners are satisfied, because they know that they possess a car that will give satisfactory service at minimum expense, every day in the year, and that looks as stylish and imposing—without extra charge for the style and imposition—as the highest-priced cars made anywhere. Being built upon well-tried design and honestly made they are free from the find-me-out-later-on handicap of some other manufacturers.

We will sell Maxwell cars, some ten thousand of them, at legitimate prices—prices high enough to give to our dealers and to ourselves a legitimate profit and low enough to give to every purchaser the full value of his money.

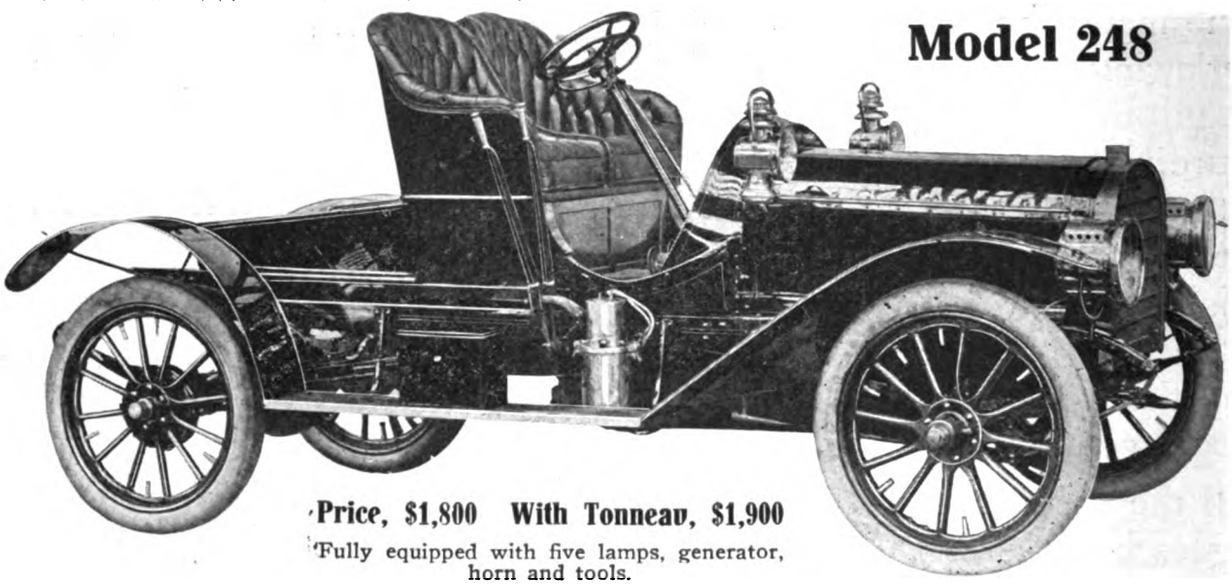
The only change we will make will be in the distribution of profits resulting from the sale of Maxwell cars. Here the new arrangement will favor the individual dealer, giving the hustler the hustler's reward. If you are a hustler we want you and you will want us So let's get together as soon as possible. Write to me now, telling me something of your territory and its sales possibilities, and I will communicate with you and tell you of the new Maxwell selling plan, the plan for business-getters.

Benj. Briscoe
President.

MAXWELL-BRISCOE MOTOR CO.
Members A. M. C. M. A.
P. O. Box 106, Tarrytown, N. Y.
Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

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Rambler



Price, $1,800 With Tonneau, $1,900

Fully equipped with five lamps, generator, horn and tools.

Here is an Unusual Car!

FOUR cylinders; full 30 horsepower; adjustable roller bearing transmission; transmission gears made of special steel that will neither mar nor chip; floating type rear axle; full elliptic rear springs.

With tonneau, a complete touring car; full size; five passenger capacity; 108-inch wheel base; 34-inch wheels and 4-inch tires.

Quiet, powerful, flexible and handsome.

Tested by three seasons' continuous service and perfected by the knowledge gained from twelve thousand Ramblers in daily use.

Where else can you obtain similar value—size, power, efficiency, reliability, appearance and comfort?

Write today for the special 248 catalog and complete particulars

Thomas B. Jeffery & Company

Main Office and Factory: KENOSHA, WIS.

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, Thursday, July 2, 1908. No. 14

MAKERS OF SPEEDOMETERS CONFER

Problem of Regulating Prices the Subject of Discussion—No Action Taken, but Another Meeting is Probable.

Following the successive conferences of first the tire manufacturers and next the lamp makers, a meeting of those manufacturers of speedometers who are members of the Motor and Accessory Manufacturers, Inc., was called by D. J. Post at the Hotel Belmont, New York, on Monday of this week.

Its purpose, like those of the two meetings which preceeded it, was to try to devise ways and means for the proper regulation of prices and their maintenance, and the correction of such abuses and shortcomings as have gradually developed.

Representatives of three concerns were present and while it was admitted that some dealers were guilty, it was conceded that the jobbers were the worst offenders, and their regulation a difficult matter unless by the drastic method of elimination. As is generally known, one prominent maker has already practically done this very thing. He has secured proof of violation of price contracts and has gone even further by searching out reputed offenders, and where proof is secured inflicting the penalty of cutting them off the list. This position, he announced, will be maintained, and while its logic is admitted, its expediency is questioned unless all the makers are brought into line and agree to act in unison and in good faith.

It is likely that a further meeting will be called at which some definite plan will be submitted for action.

Crown Battery Seeks Dissolution.

Judge Blanchard of the New York Supreme Court has appointed Jacob J. Long, receiver of the Crown Battery Co., 192 Southern Boulevard, New York City. Mr. Long with John R. Pettit, both directors of the company, petitioned for its voluntary dissolution. The company's liabilities aggregate $6,855; the assets comprise cash, $4; accounts, $904; plant and machinery, value not stated. The Crown Battery Co. was incorporated March 1, 1907, with a capital stock of $20,000, increase to $50,000 on February 1, 1908, and was engaged in the manufacture of dry cells and electric batteries.

Payment of Pope Dividend Ordered.

Vice Chancellor Howell of the New Jersey chancery court has signed an order directing the receivers of the Pope Mfg. Co. to pay a 25 per cent. dividend on all approved claims against the company. The dividend was conditionally authorized several weeks ago to take place as soon as the $50,000 was received from the sale of stock of the American Wood Rim Co., owned by the Pope company and which was sold to E. J. Lobdell, the head of the wood rim pool.

The order also directs the receivers to set aside $65,000 for the future payment of 25 per cent. on the claim of Louise A., Josephine, Anna L. and Otto F. Unzicker, who are owners of premises formerly occupied by the Western Wheel Works, in Chicago, which had been leased by the Pope company, which lease at $25,000 per year, has 17 years to run. The receivers are further ordered to deduct from the dividend due the International Trust Co. of Boston the amount of money on deposit with it to the credit of the Pope company at the time of the appointment of the receivers.

In accordance with the order, checks were mailed to the creditors this week. It is expected that a second dividend of 25 per cent., if not more, shortly will be declared.

Standard Rim Bobs Up Again.

A meeting of the committee on the standardization of rims was held on Monday of this week, and declared for a continuation of the present policy—whatever that may be. A standard rim is likely to be adopted just as soon as it is decided which rim is best.

SPEEDOMETER COMPANY ASSIGNS

Trustees Appointed for the R. H. Smith Mfg. Co., of Springfield—The Step Taken for Protection of Creditors.

Following only a short time after the nominal reorganization which was occasioned by the shocking death of R. Hale Smith, its former president, the R. H. Smith Mfg. Co., Springfield, Mass., assigned to Robert A. Knight and Charles H. Beckwith, trustees, late last week. The action was taken on behalf of and by the consent of creditors representing a large part of the company's liabilities, which are said to total approximately $50,000, and was purely a protective measure.

Both the rubber stamp and speedometer business, which represents the company's invested capital, are in profitable condition, Attorney Knight declared in a recent interview, and for that reason, there is likely to be no change in the conduct of the business. The main reason for the assignment, he said, was simply that the business had outgrown its capital. The company is capitalized at $20,000. Notice of the assignment was issued to the creditors in the form of the following communication under date of Friday, 26th ult.:

"The R. H. Smith Manufacturing Co. of this city, deeming it advisable for the protection of its creditors, has this day made an assignment to the undersigned for the benefit of its creditors. An inventory is being taken, which will soon be completed, and you will then receive from us a copy of the same, with a copy of the instrument of assignment and further information regarding the condition of the company.

"Respectfully yours,

(Signed)

"ROBERT A. KNIGHT,

"CHARLES H. BECKWITH,

"Trustees."

Just what definite course will be pursued to take care of the company's liabilities is uncertain, according to Attorney Knight. He said the company had about

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3,000 of the Smith speedometers in stock, and steps would be taken immediately to convert some of the company's assets into cash.

It was said that the rubber stamp business had been unusually successful over a period of 25 years, and has in that time contributed handsome profits to the company. The speedometer, which was taken on by the company about three years ago, is regarded to-day a mechanical success.

Through the three years that the speedometer business has been carried by the company, however, the progress on the invention has been largely experimental, a process which has been costly and has consumed the company's surplus. To-day, when the business is actually on a paying basis, it is asserted, the interests of the company's creditors as a whole demand that the business be safeguarded in order to prevent a smash.

Fiat Absorbs Palais de l'Automobile.

By a deal effected on Saturday, 27th ult., the Fiat Automobile Co., of New York City, becomes exclusive American distributors of Delaunay-Belleville cars and subagents for Renault and Panhard cars. On that date the company officially absorbed the Palais de l'Automobile, having previously effected a union with the Auto Import Co., sole American agents of Rochet-Schneider cars. H. Nepbauer, former manager of the Palais de l'Automobile, becomes second vice-president of the Fiat Automobile Co., and on July 1 will take up his office in the new headquarters of the latter at No. 1786 Broadway. E. Rand Hollander remains first vice-president and general manager of the enlarged company.

The cause of the absorption, first of the Auto Import Co. and then of the Palais de l'Automobile, is declared to be directly due to the lowering of Fiat prices to an American basis. The sales of Rochet-Schneider and Delaunay-Belleville cars were considerably affected and unable to meet the Fiat prices. Negotiationswere opened in behalf of both of these makes that have ended in the consolidation of all three. While Fiat cars will constitute the principal output of the company, users of the other makes will be looked after.

Changes in the Winton Staff.

Following the promotion of Charles W. Churchill, formerly New York branch manager, to the general sales management the Winton Motor Carriage Co., announces other changes in the staff. Charles M. Brown, San Francisco branch manager and formerly manager of the Winton branch in Chicago, has been named to take the management of the New York branch. Harry L. Owesney, assistant manager of the San Francisco branch, becomes manager of that branch. The company also announces that W. L. Duck, former London branch manager, will be manager of the Baltimore branch, vice R. H. Williams, resigned.

The Week's Incorporations

Long Beach, Cal.—Electric Automobile Co. of Long Beach, under California laws, with $10,000 capital.

Dover, Del.—Guaranteed Faultless Auto Tube Co., under Delaware laws, with $1,000,000 capital. Corporators—F. N. Hipple, J. W. Ebbs, M. L. Ward, New York City, N. Y.

Chicago, Ill.—North Automobile Co., under Illinois laws, with $2,500 capital; general manufacturing and merchandise business. Corporators—A. B. Pease, L. Pierson, George A. Miller.

Jersey City, N. J.—Elkwood Park Automobile Association, under New Jersey laws, with $10,000 capital; to hold and manage automobile races, exhibitions, shows, etc. Corporators—B. S. Mantz, J. R. Turner, R. R. Thien.

New York City, N. Y.—S. P. O. Automobile Co., under New York laws, with $25,000 capital. Corporators—Jules Godefroy, 316 West Twenty-fifth street; Albert M. Newburgh, 150 Nassau street; Anna H. Peyser, 245 West 111th street, New York City, N. Y.

Camden, N. J.—Grant-Hoover Ball Co., under New Jersey laws, with $200,000 capital; to manufacture ball and roller bearings for axles of trucks, railroad cars, wagons, carriages, etc. Corporators—R. H. Grant, L. J. Hoover, V. E. Frank, Camden, N. J.

New York City, N. Y.—Central Park Taxicar Co., under New York laws, with $10,000 capital. Corporators—Henry Schultz, 1864 Seventh avenue; George Hahn, 160 East Ninety-fifth street, New York City N. Y.; C. Bertram Plante, 763 Eastern Parkway, Brooklyn, N. Y.

In the Retail World.

The Ellicott Motor Car Co., Buffalo, N. Y., has been discharged in bankruptcy.

W. R. Barger has arranged to open an exclusive Cadillac agency in Cleveland, O., on Euclid avenue, just east of the Hartford Rubber Co.'s local branch.

Thomas G. Miller and Charles F. Holden have opened a new garage in Colorado Springs, Col., at the north end. They have secured the agency for the Gearless car. Their garage is at 1206 North Cascade avenue.

The Lakeside Automobile Co., of St. Louis, has reorganized as the Swingley Motor Car Co. J. A. Prescott continues in the position of manager. The company handles the Car de Luxe, Jackson and Stoddard-Dayton.

Vice-Chancellor Howell at Newark on the 24th ult., appointed William H. Brown receiver of the Hygrade Motor Co., 9 Hill street, Newark. Insolvency is alleged in a bill filed for J. Harry Hardman, the petitioning creditor.

T. Browning Spence has bought a majority of shares in the Pope Automobile Co., Washington, D. C., and will be elected president of the company. C. Royce Hough, who has been manager since 1899, will be retained in that position.

Among losers by a fire in the building 1525-1531 Maryland avenue, Baltimore, on the 25th ult., was the Maryland Auto Tire Repair Works. The building was so badly damaged that it has been condemned and all the occupants have been ordered to vacate.

W. Wayne Davis is manager of the new Matheson branch in Philadelphia, which was opened on the 29th ult. It is located at Broad and Green streets. Mr. Davis is chairman of the automobile committee for "Founders' Week," when the Quaker City will celebrate its 225th anniversary. The appointment was made by the mayor.

On July 1 of this week, the Harry Fosdick Co., long identified with the automobile interests of Boston, Mass., retired from business. The lease of their store in the Motor Mart has been taken up by the Buick Motor Co., which established a Boston branch at that place on the date named.

Otto Braunworth, proprietor of the Broadway Rubber Tire Works, Manhattan, has opened an automobile supply store at 53 West Fifty-third street. He will conduct it in conjunction with his tire repairing plant next door. Hereafter his business will be conducted under the name of the Broadway Auto Accessory Co.

The Augusta Motor Co. is the designation of a branch house to be established in Augusta, Ga., by the Charleston Motor Co., of Charleston, S. C. L. M. Coward is making the local arrangements and has secured a location at 712 Ellis street. The company will conduct an agency for five different manufacturers.

C. A. Coey & Co., Chicago, filed four "automobile debt" suits in the municipal court on the 26th ult., one of which may interfere with the debtor's intended trip to Europe. In this case the Coey Automobile Livery Co., also has a suit, the claim being for a storage bill amounting to $1,000. Conrad Seipp, Jr., is the defendant, and the bill of C. A. Coey & Co. is for an alleged balance of $2,000 on a new machine. Another of the suits is against M. B. Hereley, traction expert for the city, from whom the firm wants to collect $5,000, alleged to be due for a new car. The Coey Automobile Livery Co. adds another suit to the four of the Coey firm, making five in all.

Cadillac to Open a New York Branch.

The Cadillac Motor Car Co., of Detroit, Mich., has decided to open a New York branch, from whence all their eastern business will be handled. Temporary quarters have been taken at Broadway and Fifty-first street, and early in the Fall they expect to occupy a new building now in course of erection. Ernest H. Brandt will be in charge.

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TARIFF BARS AMERICAN TIRES

Discriminative Duties Practically Close the French Market—One American Type Manufactured in France.

Although rubber tires are not listed separately in the statistics of American exports, it is generally known that the foreign market has not been extensively cultivated by the American tire makers. A valid excuse for this state of affairs, at least as existing in France, is furnished by Consul-General Robert P. Skinner, of Marseilles, who points to the duty wall which blocks the way, and which amounts to practically 8 cents per pound, as against 6 cents a pound levied against tires imported from other countries.

"A very serious obstacle to the creation of a demand in France for rubber tires of American manufacture is the application of a duty upon such tires of 90 francs per 100 kilos ($17.37 per 220 pounds)," says Consul-General Skinner. "The consequence is that importations from the United States have been unimportant. It is impossible to furnish any reliable statistics regarding the trade, as rubber tires are comprised with a long list of other articles in rubber.

"One well known American house, appreciative of the difficulties of disposing of American tires in France, has passed over to a French firm its patent rights, with the result that, as in several other lines of industry, 'American' solid rubber tires are being very extensively sold in this country, although there is nothing American about them except the type.

"The general demand is said to be for a solid tire through which run two parallel steel wires. A pair of tires for wheels 39.37 inches in circumference commands from $24.30 to $35.90, according to the thickness of the round rubber, and flat tires for wheels of the same size run up to $96.50.

"Very few imported automobile tires are sold in this market for the same reasons as in the preceding case. Prices are steadily descending, in sympathy with the cost of raw rubber. It is said that $160,000 worth of these tires were sold last year in this city. The tires offered for sale are being improved annually, not in respect to the rubber portions, but as regards the canvas linings.

"It is calculated that a smooth-surface tire should run between 5,000 and 6,000 kilometers (3,106 and 3,728 miles), while the anti-skidding tires are hardly good for more than 4,000 kilometers (2,485 miles) on French roads. It is comparatively seldom that one sees a general service automobile in cities without at least one nail-shod tire. There is quite a variety of these devices, some being nail-shod leather envelopes, others metal nails on the rubber envelopes, and still others rubber nails which are a part of the rubber envelope itself. Eventually the nail wears through the canvas linings, and then repairs are difficult. The use of chains woven about smooth tires, such as are seen in New York, would not be permitted here under any circumstances. As it is the nailed tires are doing incalculable damage to the roads."

How Consular Advices Benefit Trade.

Interesting as showing the beneficial results obtainable by following up advices received from the American Cansular Service, is the result of one such hint which recently reached the officers of an association of automobile manufacturers. Consul Miller, of Matamoros, advised them that there was not a single automobile in that Mexican district. Acting on the suggestion, numerous catalogues were sent out by the members of the association, in consequence of which, at least two sales are in immediate prospect, while in a third case, the establishment of a 25 mile motor 'bus line from Matamoros to the seashore is contemplated. As there is no railroad transportation in the immediate vicinity of the proposed route, the scheme is very favorably regarded. The trial equipment, it is said, is to be rented at Brownsville, Tex., pending developments which will warrent a more extensive outlay of capital.

Kansas City Developing a Motor Buggy.

Although formerly devoted exclusively to the production of commercial vehicles, the plant of the Kansas City (Mo.) Motor Car Co., at Sheffield, is at present occupied with the development of a motor buggy, which is being built under the direction of A. R. Walton, formerly with the Dorris Motor Car Co., of St. Louis. It is intimated that a "deal" is in prospect whereby a local implement firm will take over a certain number of the cars provided they work out in a satisfactory manner. A reorganization of the company, which has been in financial difficulties for some little time, is said to be among the early prospects.

Reeves on the Road to Recovery.

The many friends of Alfred Reeves, general manager of the American Motor Car Manufacturers' Association, who was operated on for appendicitis on the 24th ult., at St. John's Hospital in Yonkers, N. Y., will be glad to learn that he has passed the critical stage of his illness and is convalescing rapidly. He expects to be able to resume his regular work about the middle of the month.

Makes a Second Offer for Pope Claims.

The Chicago concern which makes a business of doing such things, has offered creditors of the Pope Mfg. Co. 85 per cent. of the face value of their claims. About a month ago, it made a similar offer of 75 per cent.

CUSHION SPRINGS IN LITIGATION

Infringement of the Stotts Patent Alleged Against a Kalamazoo Manufacturer—Three Corporations Involved.

Springs of the type commonly employed in automobile upholstery and embodying the auxiliary or supplementary spring feature, are furnishing subject matter for litigation in the United States Circuit Court for the Western District of Michigan, in which Rummler & Rummler, patent attorneys for the Ventilated Cushion & Spring Co., of Jackson, Mich., have brought suit against Frank P. D'Arcy, of Kalamazoo, Mich., for infringement of what is known as the Stotts patent. The proceedings are based upon the production by D'Arcy of a spring construction which has been advertised and described as the product of the D'Arcy Spring Co., of Kalamazoo. This device, it is alleged, constitutes an infringement of five different claims of the Stotts patent.

The construction of the D'Arcy spring differs from that employed by the Ventilated Cushion Co., in that it omits the connection between the upper ends of the short or auxiliary springs, and also in that it has the short springs so set into the bottom frame as to permit of a slight lateral shifting. Otherwise, it is said to be similar in principle.

The Stotts patent for "Spring Structure," was issued on January 8, 1907, and assigned to the Ventilated Cushion & Spring Co., a month later. It is one of a group of patents owned by the company and reinforced by applications for others, bearing on the same subject and completely covering spring structures with auxilliary or supplementary springs, as is claimed.

The action, though taken by the Ventilated Cushion Co., also covers the rights of the Jackson Cushion Spring Co., of Jackson, Mich., licensees of the former concern, who are thereby afforded protection against the manufacture, sale and use of infringing spring constructions.

Boston Gets Taximeter Cab Service.

Fifty Thomas motor cabs were put into taximeter service in Boston, Mass., last week by the Taxi Motor Cab Co., under the direction of Willlam P. Barnhart. The company's headquarters are located in the Park SquareMotor Mart, and substations are to be established at all leading hotels, clubs, cafes, and at both railroad stations. The usual tariff of 30 cents for the first half mile, and 10 cents for each succeeding half mile, or each six minutes waiting, will be charged. The plans for this first introduction of the taximeter vehicle into the Hub call for an ultimate equipment of 150 vehicles, to be installed as soon as conditions warrant.

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WHITE WINS

A Partial Summary of Victories, May, 1907-May, 1908

Perfect Score in Harrisburg Endurance Run

Tieing with three other cars in the contest of May 5th-6th, 1907. For the result of the "run-off," see below.

Fastest Time in Wilkes-Barre Hill-Climb

Defeating 45 high-powered gasolene cars, in the great contest on Decoration Day, 1907.

Fastest Time in Cleveland Hill-Climb

Defeating 40 high-powered gasoline cars.

Fastest Time in California Hill-Climb

Defeating the fastest of its gasoline competitors by nearly two minutes on the 2⅞ mile hill at Witter.

Perfect Scores in Sealed Bonnet Contest

Both White cars entered made perfect scores in this contest conducted by the Automobile Club of America.

Officially Observed Non-stop Run of 1871 Miles

Held under the auspices of the Royal Automobile Club of England and certified by that organization.

Fastest Time of the Season on the Track

One mile in 1:02, ten miles in 12:54, and twenty-five miles in 29:07 at the Santa Rosa Track Meet.

Officially Declared Most Efficient Car

In the South Harting hill-climb, conducted by the Royal Automobile Club, the White won the contest because it developed at the rear wheels a greater percentage of its assigned horsepower than did any other car. The rating assigned to the White was 50 horsepower.

Wins English Dust Trials

Proving officially that it raises less dust than any other car.

Clean Sweep in the Glidden Tour

Three White entries make three perfect scores.

Won Hower Trophy

The single White runabout entered in the Glidden Tour defeated a dozen high-priced gasoline runabouts competing for this prize.

Won California Reliability Contest

In the original contest held September 20th, two Whites tied with two gasoline cars. In the "run-off" held November 15th and 16th, both Whites made perfect scores, while both gasoline cars were penalized.

Won Quaker City Endurance Run

In this contest, held January 1st, 2d and 5th, the White vanquished 27 gasoline cars of 23 leading makes, winning the MacDonald & Campbell trophy.

Fastest Time in San Francisco Hill-Climb

Winning the free-for-all, the $2,500 class and the $3,500 class.

Fastest Time in the New York Carnival Hill-Climb

Making the ascent of Fort George hill in 32⅕ seconds, compared with the best gasoline time of 36 seconds; largest entry list of any hill-climb ever held.

New San Francisco-Los Angeles Record

The White car made the 478-mile mountainous journey in 17 hours and 17 minutes, cutting 56 minutes from the previous figures.

Double Victory in Harrisburg Endurance Run

The single White entry was the only touring car to make a perfect score, winning the principal 1908 trophy, the Board of Trade Cup, and also the 1907 prize in a "run-off" with last year's other perfect-score drivers.

Perfect Score in Detroit Endurance Run

Perfect Score in Baltimore Sealed Mechanism Contest

Two Perfect Scores in Kansas City Reliability Run

WRITE FOR LITERATURE

THE WHITE COMPANY, Cleveland, Ohio

NEW YORK CITY, Broadway at 62d St.
SAN FRANCISCO, 1460 Market St.
PHILADELPHIA, 629-33 N. Broad St.
BOSTON, 320 Newbury St.
CHICAGO, 240 Michigan Ave.
PITTSBURG, 138-148 Beatty St.
CLEVELAND, 407 Rockwell Ave.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JULY 2, 1908.

Elimination of the "Season Feature."

A striking feature of the present season is the great number of new models which are being brought out—whether in anticipation of the market of 1909, or as timely additions to the present listings, does not matter in this connection. The fact that practically all of these machines are designed with a direct view to general utility, whether in veritable commercial operation, or as pleasure cars for all around service, also need not be considered; nor the fact that a very great proportion of them are of the so-called popular type. The very essential point in connection with the frequent use of the numerals 1909, is that when the new calendar shall have arrived, it will find a great majority of the makers prepared for the season, and it will unfold a market in which will be listed for the most part, only cars which have been tried out and refined to the complete satisfaction of the makers.

This elimination of the "season feature" in the industry, which has been practically assured for some little time, also has an important bearing on the display of machines at the shows. It means, in the first place, that the old, familiar and nerve-racking rush to get ready the various exhibits for the show will soon become a thing of the past. Changes in the market will come more slowly than heretofore, and the makers will no longer strive to have an entire new line for every exhibition of national importance which is held. The dubious proof of undue haste, which has been so marked hitherto, when cars frequently were shown incomplete, or were finished after being placed in position, will be visible no longer, and the show will become an exposition of what exists, rather than of what is planned for the future, more or less contingent on the results of the show itself.

If one great fault existed in nearly all shows of the past it was that their exhibits, many of them, were of too visionary a nature to be satisfactory to the careful buyer. The invariable consequence was that the actual results of show campaigns, did not appear until long afterward, when the cars themselves were actually ready for delivery, while many of the sales booked at the shows, did not materialize as expected. With the new order of things, this will be changed. Buyers will be able to examine a finished and satisfactory product under the most favorable of conditions, while the makers will be saved a vast deal of overtime rush work in preparation for them, and will have the confidence bred of handling a known product, in presenting their wares.

Evils of Overstating the Output.

One of the most insidious evils to which the automobile industry has fallen heir is the tendency to the circulation of stories of huge outputs, such as are wont to make their appearance from time to time. Superficially it might appear that these rumors —many of them are hardly more—could have no effect other than to attract attention to the particular makes of car with which the inflated figures happen to be associated. Actually, the result is far more searching and reaches to the very heart of the industry, while the public, upon which the effect would be supposed to fall directly, suffers only in a secondary and rather roundabout way.

To the prospective buyer, stories of the immense production, of one or another of the makers acts primarily as a stimulant to investigation. A natural conclusion which in many cases follows immediately afterward, is that at the visible rate of present consumption, this great number of machines cannot be disposed of at present prices. The result is a strong temptation to wait for a cut in prices. This temptation is increased by the inbred conviction in the breast of the average man outside the confines of the industry, that sooner or later an era of automobile bargains will arrive—just how, does not matter.

But even more disastrous than the delaying of a few orders from individual owners, is the corresponding effect upon the agents. In this case, however, the effect is emphasized by a close comparison of the figures of other maker's outputs, garnered from the press, and from the channels of trade gossip. Where it is commonly believed that a maker's output is exceeding the probable demand for his product, the shrewd dealer inclines, like the shrewd customer, to wait for bargain day. Where, on the other hand, rumor and gossip concur in rating a maker as successful on a large scale, the tendency is for the agent to overrate his own selling ability and the possibilities of his own corner of the field, and to make demands for a greater number of cars than he can profitably handle.

In any case, the maker about whom such reports are current, is placed on an insecure and treacherous footing thereby. Stories of voluminous output may lead to rumors of overproduction, on the one hand, or they may lead to over-confidence on the part of agents, to unwarranted volume of orders, and so to the glutting of the market. So long as the reports are exaggerated, there is danger of disaster from any and every quarter.

A point which is seldom considered in the retailing of such reports is that it takes a vast amount of time and money to prepare to manufacture on a really large scale. A big plant, expensive equipment, trained forces, unfettered capital, are some of the items which must be figured in forecasting an extraordinary output. Manifestly, in more than one case where such stories are applied, it is a physical impossibility for more than a moderate amount of material to be turned out in the course of a season. Consequently, unless a manufacturer is known to have more than ordinaily extensive facilities, reports of more than ordinary magnitude of production must be received with caution, and must be regarded in the

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light of either an unfortunate circumstance or a mistaken policy. Always their effect is apt to be disastrous.

Psychological Aspect of Speed Problem.

To the student of psychology an interesting question is presented by the apparently honest declaration of motorists, who are arraigned in court charged with exceeding speed limits, that at the time of arrest, the vehicles which they were driving were not traveling at nearly so fast a speed as that specified in the complaint. Seldom indeed does the accused admit the rectitude of the assertion of the arresting officer, as to the time required to cover a measured distance. Invariably—one might almost say with truth, never—does the defendant in cases of this sort agree with the statement made by the policeman. The question therefore is, does the prisoner deliberately and intentionally lie, or is he making a plea to the court which he himself really believes to be honest?

To those who are familiar with the smoothness of the motion, with the lack of vibration and of noise which accompanies a well balanced, high powered car when traveling at a speed of 20 to 25 miles an hour, there is given an understanding of the reasons which may account for an honest difference of opinion between the officer and the motorist. The latter is influenced in his impressions by memories of many experiences in trolley cars and other vehicles, where, traveling at a much less speed than that with which he now is accused, his journeys were accompanied with noise, the rattle and bang of mechanism, loose bolts and other accompanying discordant sounds, which have become associated in his mind as almost synonomous with "speed." With these memories, which undoubtedly are not without their influence on his mentality, the motorist cannot believe that the easy riding, silent moving vehicle which he was driving could travel as fast, as is asserted by the officer, without at least a degree of discomfort to the occupants, which would compare in some measure with the recognized discomforts associated with rapidly moving vehicles of other sorts.

On the other hand, the statement of the officer contains assertions of the conditions under which the arrest was made, which, if true, prove conclusively that the arrest was justified. The policeman asserts that the car traversed a correctly measured distance within a certain number of seconds. He states that the time was noted on a watch especially designed for the purpose. If these statements are statements of fact there can be no question as to the guilt of the prisoner. True it is, that there are many known instances where the officer committed deliberate perjury. But it is equally true that the police seldom make unjustifiable arrests for exceeding the limit.

What, then, is the conclusion the layman is to form after reading the reports in the daily press of the number of motorists arrested for speeding, all, or nearly, of whom deny the accusation? Is he to conclude that all motorists are liars or that all policemen should be placed in that category? Or can he with justification, believe that each side of the controversy has stated an honest view of the matter? It is a curious condition of affairs and one which constantly is brought before the attention of the public. An explanation of the problem, based on the possible influence of "auto-suggestion," would be interesting, and the psychologist or metaphysician might discover in that way a solution which will be in refutation of the plaint of David, who said in his haste, "all men are liars."

Deodorization of the Exhaust.

Viewed in an unusual though none the less important light, the various improvements which are being wrought in the automobile tend above all to make it less offensive to the public from year to year. Improved carburation and better proportioning of the parts of the motor lead to a reduction in the noise of the machine; better gear construction has led to the elimination of the "songs" by which some of the better known makes of car used to be distinguishable even on a very dark night; improved muffler design and improved arrangements of the valve gears have served also to cut down the roar and clatter of the machines, while betterments in spring and body design have relieved the old offenses to the passengers, as well as to the man in the street. Even the nuisance of the odorous exhaust has been in part alleviated by the establishment of more perfect combustion in the motors, and the occasional elimination of over-lubrication. Actually, however, in the rationalization of the modern car, the sense of smell is about the only one of the human attributes which has been neglected.

It is very ridiculous at first thought, to consider at all seriously the possibility of removing the obnoxious qualities from the exhaust. When it is borne in mind, however, that abroad, laws are being enacted for this very purpose—since the visible fumes generally are the most disagreeable—that the smoke nuisance is one of the great est menaces to the health of great cities; and even more, that the popularity of the motor vehicle must increase in proportion to its inoffensiveness as well as its satisfactory performance, it must appear that even the purification of the exhaust, if it could be accomplished economically, would be of great value to the industry in the long run.

A method of accomplishing this by means of a simple and inexpensive scrubber has been invented in England, and is already on the market. Without opportunity to observe its working, it would appear that its use should be accompanied by no loss of power, and that the benefit derived from its use could not fail to be far and away beyond the cost of its installation. That some such arrangement, if not absolutely in that form, might be successfully devised, there is no question. As to the requirement for it, it is merely necessary to observe the improvement in silencing, and to note the high esteem in which silent running cars are held, to estimate the value to its user of such a device. In the last analysis, it is but extending the use and purpose of the muffler, which is no longer considered in the light of anything but an essential organ in the machine.

COMING EVENTS

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Douglas City, Ariz.—40 miles road race over city streets and country roads.

July 4, Pueblo, Col.—State Fair Association's meet at fair grounds track.

July 4, Glens Falls, N. Y.—25 miles stock car race at mile track.

July 4, Baltimore, Md.—Motor Car Racing Association's meet at Pimlico track.

July 4, Long Branch, N. J.—Elkwood Park Automobile Association's meet at Elkwood Park track.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 9. Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, St. Paul, Minn.—Automobile Club of St. Paul's meet at Hamline track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

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CARNIVAL SPORTS AT STROUDSBURG

Many Interesting Contests in Four Days' Meet—Fast Going in Hill Climbs—Gymkhana a Lively Final.

For the reason that the summer hotels are not yet even comfortably filled the four days' carnival promoted by the Monroe County Automobile Association last week in the vicinity of the Delaware Water Gap and Mount Pocono regions did not attract the big crowds that had been expected and therefore unusual enthusiasm did not develop. To be sure, fair sized crowds saw some of the events, but it was made up mostly of "natives" as the all year around residents are designated, reinforced by a sprinkling of summer boarders and waitresses.



FAR EXTENDING VIEW FROM CANANDENSIS HILL

The carnival began on Wednesday, 24th ult., with what was to have been a reliability endurance run starting simultaneously from New York City and Philadelphia, but only the latter part of the affair materialized. Quite a number of cars made the journey from Philadelphia to Stroudsburg, Pa. There were three classes to be decided from each city, these being distinguished between touring cars proper, roadsters and tourabouts and small runabouts. It was easy enough to find a winner in the latter class, inasmuch as H. McKay White, with a Ford runabout had the field all to himself. Class A, open to touring cars, presented an entirely different proposition. There were in competition Frank Yerger, Studebaker; W. F. MacGraw, Thomas; Walter M. Cram, Mitchell, Frank Hardhart, Jr., Elmore; and E. S. Shetzline, driving a car of his own design which he called the B. F. S. The 88 miles of give and take roads were covered by all except Yerger and MacGraw, with no penalties against them. The technical committee got to work to evolve a winner and the prize was awarded to the Elmore. Yerger lost his perfect score because he was held up by the police in Doylstown, and MacGraw was stopped by two fallen trees across the roadway. Class B was for roadsters and again the tied score predicament presented itself. George H. Stetson, Thomas-Detroit, and J. F. Brown, Autocar, finished with perfect scores, but the former's car survived the extra tests set by the technical committee and so was given the cup.

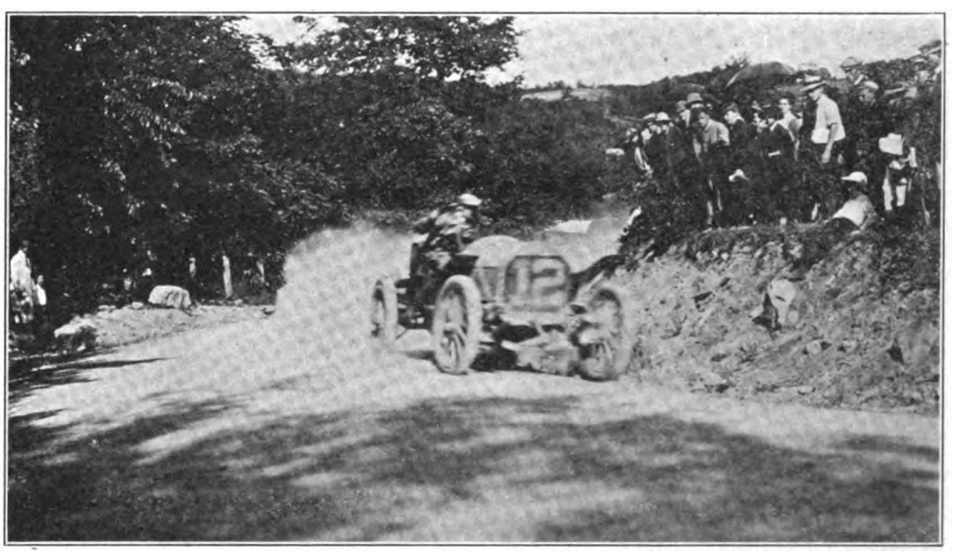
H. J. Kilpatrick came about as close to staring death in the face as he wants to in the hill climb up the Water Gap hill on Thursday, the 25th. Kilpatrick was the last to start in the free-for-all event and was going at the rate of a mile a minute when he struck a sharp curve half way up the steep hill. The big racing car skidded and banged into a telegraph pole, snapping it in twain. Kilpatrick was thrown out, but miraculously escaped injury, while the car was not damaged so badly but that it could be fixed up for the straightaway trials on the following day.

The Water Gap hill is 5,000 feet long and although there was a woeful lack of entries and spectators fast times were made by the cars that did run. There were two entries in the event for cars costing between $2,250 and $2,000, and a Rambler driven by W. F. Pierce beat J. A. Rutan's Jackson by nearly six seconds. The time of the former was 1:46⅖, and of the latter, 1:52.

H. D. Church, driving a Buick was the first car to make the ascent in the event for cars between $851 and $1,250, and he reached the summit in 2:22⅕. R. C. Rutan in a Jackson, came next and finished in 2:26⅕, but because a dog crossed his path he claimed another trial and lowered his time to 2:20. This resulted in another claim for a second trial by Church, and he made a spectacular run in 2:13⅗.

The Studebaker had practically no opposition in the class for cars selling between $2,000 and $3,000, covering the distance in 2:23⅕. The Thomas did not compete in the class for higher-priced cars and Jules Perigue, Zust, enjoyed a walkover in 2:04. In the free-for-all Perigue lowered his time to 1:57, which stood as a record for the course.

Friday, the third day of the carnival, was probably the most interesting day of all as there was a double bill—a series of mile time trials on the Pocono summit State road in the morning, and a hill climb on Canandensis hill in the afternoon for amateur drivers. There were no accidents during the time trials and only one mishap occurred while the hill climbing events were run, that being when Halstead Swan, of Brooklyn, was tumbled out of his car at a turn in the road. The course used for the hill climb is a twisting stretch of road about 1,500 feet in length, shaped something like a huge question mark standing on its head, the start being just below an S turn. The drivers had about 200 yards to get up speed before reaching the starting tape and Swan was traveling very fast as he began the



HARRY JONES (THOMAS) MAKING BEST TIME ON CANANDENSIS HILL

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ascent of the extremely tortuous incline.

The road turns to the left about 50 yards from the start and Swan steered his car away to the right with the apparent intention of making a sweeping curve. He went too far over, however, and when he tried to turn to the left one of the wheels collapsed and the car turned over. Swan tumbled out of the seat as the machine went over and thus escaped injury.

The hill climbing events were held on a good stretch of State road, the grade being 10½ per cent., and fast times were recorded. Rutan, driving a Jackson, won the class for cars between $851 to $1,250, by reaching the tape in 42 seconds, but a big slice was made in this time in the following event, $1,251 to $2,000, when W. H. Pierce, Rambler, was clocked in 34⅘ seconds. J. E. Smith, Jackson, was second in 38⅗ seconds. Two Stevens-Duryea cars made the running in the class for cars selling between $3,001 and $4,000 that driven by T. J. Kitson winning in 34⅘ seconds, with Albert Scott only one-fifth of a second behind. This was the closest contest of the meet and both drivers were cheered when the times were announced.

Harry Jones, driving the Thomas Briarcliff car, made two trials in the free-for-all, scoring 30 and 32 seconds. The event for members of the Monroe County Automobile Association went to W. D. Church, Buick, in 43⅗ seconds, with A. C. Haney, Maxwell, second in 47⅗ seconds.

They were not eligible as regular contestants, but Kilpatrick, with his racing Hotchkiss, and Len Zengle, Pennsylvania, were allowed to make time trials. The former scored 24, 23⅕ and 23⅖ in his three trials, while Zengle made two fast runs in 28 and 27⅗ seconds.

Zengle and Kilpatrick starred in the mile time trials, in which the contestants had to cross a railroad track, Kilpatrick making the fastest time of the day in 48⅕ seconds. Zengle was second in 58⅗. The other drivers that competed in the free-for-all and their times were Harry Jones, Thomas, 1:07⅖; James Young, Zust, 1:13; and W. H. Pierce, Rambler, 1:25. Zengle won in the piston displacement class by covering the mile stretch in 58⅗ seconds. Swan was second in 1:02, and Jones third in 1:03⅗. Young was timed in 1:11, and Carton, Stevens-Duryea, in 1:09⅕.

W. H. Pierce in his Rambler, won the class for cars between 15 and 25 horsepower, his time being 1:16⅗. W. D. Church, Buick, was second in 1:23. The event for cars between 24 and 40 horsepower went to J. E. Smith, Jackson, in 1:16⅖, with W. B. Evans, Stevens-Duryea, second in 1:27⅖. Halstead Swan made the fastest time in the event for cars from 40 to 60 horsepower when he accomplished the mile in 1:00⅖. Young in the Zust was second in 1:16.

Several amusing gymkhana events held on a dusty half mile track was the program for the final day and had not the ticket takers become so interested in the events that they forgot their duty at the gate, the promoting organization would have sold more tickets. A large crowd of spectators was on hand, but most of them came through the unguarded gates while a hundred or more found the big holes in the fences convenient. The promoters could not understand this attitude either, as they had made the admission fee only 25 cents.

Eight interesting events kept the crowd in good humor. The first was a race to cover 880 feet in one minute, or at the rate of ten miles an hour. The slowness of a car traveling at ten miles an hour did not fail to make its impression, and two of the county supervisors took particularly good notice of the speed. This event was won by J. E. Smith's Jackson in 1 minute flat.

The next event was a potato race, where the driver had to dismount, find a potato in one of six tubs, transfer it to another tub, remount and proceed around the track. This was run in three heats on account of the number of entrants in one of the heats. Two Cadillacs gave a pretty contest, being neck and neck after the transference of the harmless but necessary potato. The winner in the final heat was the Buick, driven by H. S. Church.

The potato was again the butt in the third event. This time was was speared, and H. D. Gaines in the Zust speared best. Having done these stunts forward, reverses were given a chance. The Zust retired both speedily and gracefully, and its driver received the blue ribbon. An obstacle race furnished Church in the Buick an opportunity to show as pretty an ability to turn as had ever been witnessed. Snakelike movements between eight sets of barrels were made in the quick time of 45 seconds. An umbrella race, in which a passenger had to get out, grab a paper umbrella, get in and keep the umbrella open without tearing it or turning it inside out, resulted in another victory for the Zust's driver, who seemed unusually agile.

Kilpatrick made a remarkable exhibition when he covered the half mile track in 34⅘ seconds. Considering the dusty track the performance was phenomenal, but the driver declined to attempt to better this time, claiming that the track was too dusty to take any chances upon.

A polo game in automobiles wound up the meet, and it proved amusing. The cars carried two passengers, one of whom carried a polo stick. A rubber ball was kept in motion all the while and it was amusing to see the cars run around the field trying to locate the ball. T. E. Smith, in a Jackson, was the winner, but no time was obtainable as the timer had become frightened and headed for the hotel.

Move to Untangle the Foreign Situation.

For the purpose of unraveling the tangled foreign situation resulting from a misunderstanding of the relations existing between the American Automobile Association and the Automobile Club of America, president Hotchkiss, of the former organization, this week appointed a Committee on Foreign Affairs, to represent the governing body abroad. All of the five members named are either abroad at the present time, or will be in Europe at or about the time of the Grand Prix race at Dieppe, which occurs on the 7th inst. Those named for the mission are: W. K. Vanderbilt, Jr., Jefferson De Mont Thompson, A. G. Batchelder, S. A. Miles, and Robert Graves.

The present plan is to secure representation at the Ostend, which is to occur shortly when the entire situation will be brought officially to the attention of what is known as the International Association of Recognized Automobile Clubs. Such action has been deemed advisable, owing to recent reports which indicate that leading motorists on the other side are not familiar with the actual facts of the differences between the national body and the New York City local club with the national title.

"The committee has been given large powers," remarks Secretary Elliott, in regard to the situation," and it is believed will make it clear abroad that there is and can be but one national body in the United States; that no single club can be such national body; and that the national body is the American Automobile Association with its24 State associations, its 200 clubs and its registered membership of 20,000."

Dividing Traffic on a Paris Roadway.

One method of dealing with the problem of automobiles on the road was devised a little over a year ago by M. Lépine, Prefect of the Police in Paris, and while its success in the Champs-Elysees does not argue that it would be equally successful on narrower and busier thoroughfares, that success is interesting as an evidence of what some public functionaries can do to make conditions agreeable all around. The avenue is divided into three sections and the Prefect decreed that the center section should be used entirely for automobiles, and the two sides for horse-drawn vehicles. In addition to proving a success from the traffic point of view, it has also manifested the fact that motor cars cause less damage to the road than their equine rivals.

The Car that Excels the Camel.

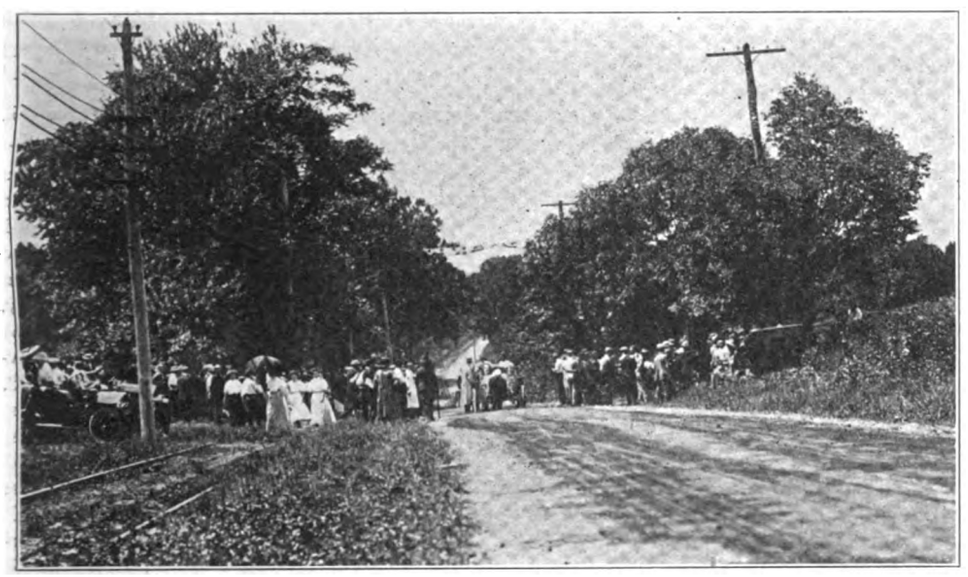
When the Cole Brothers' circus arrived in Battle Creek, Mich., they found a progressive press agent who evidently enlisted their admiration for his ingenuity. The aforementioned P. A. was connected with the American Motor & Cycle Co. of Battle Creek—the Franklin agents in that city—and he induced the circus folks to permit him to decorate one of their camels with a banner on which was the legend that "while the camel can go without water for eight days, the Franklin motor car can go forever without water." All of which served to attract attention to air cooled cars in general and Franklins in particular.

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FAST CLIMBING ON SKIPPACK HILL

Haupt Adds to His Laurels by Victories at Norristown Climbfest—Real Contests in all the Events.

By flying up the old historic Skippack pike, a slight incline with a rise of from 3 to 7 per cent., near Norristown, Pa., and covering 6,270 feet in 57⅗ seconds—a rate of 75 miles an hour—William Haupt of Philadelphia last Saturday, 27th ult., repeated his successes of Wilkes-Barre, Worcester and Cleveland and won the free-for-all event of the first annual hill climb of the Norristown Automobile Club, under a broiling sun and before a crowd of several thousand people.



THE STARTING POINT ON SKIPPACK HILL

Sixty-six cars entered for one of the greatest hill climbing contests ever held within a radius of 100 miles from Philadelphia, and there was a representative assortment of all kinds of cars and drivers to try for the diminutive cups that were offered in some of the events. The slight grade forming the road up the side of the hill of a valley renowned in history was in splendid condition for fast going, and with mountains in sight to the west, a peaceful pastoral scene below, with the usual property winding stream, the scene presented was very beautiful.

The arrangements were not as good as might be desired. After the officials had corralled all the competing cars into a paddock at the starting point it was discovered that the electrical timing apparatus stubbornly refused to do duty. They had to fall back on the telephone and split second watches. The crowd was too big for the State constabulary which policed the course and for a time a calling off of the events seemed inevitable. After the fourth event was run the officials waited until the guards could shoo the people into the paddock and stands before they went on with the next events.

Although Haupt's six cylinder hill climbing car made the fastest time of the day when he won the free-for-all in 57⅗ seconds there were other cars and drivers that earned laurels and whose performances commanded respect. One of these was the 48 horsepower Knox, driven by A. L. Dennison, to second place in 1:13⅗. Harry Goodin drove his Stearns in 1:16, and tied with J. W. Parkin in a car of his own construction. William Bourque in the little Knox was a close fourth in 1:16⅖.

There really were two free-for-all events. The one in which the fastest time of the day was made was for cars of any class or power and the other was for gasolene cars only, but as no steam cars appeared, both events amounted to practically the same thing. The one for gasolene cars only was also won by Haupt, but in slower time, 1:01, with William Bourque in the smaller Knox second in 1:15⅘. His team-mate, Dennison, was third, his time being 1:16.

The first machine to breast the upgrade was a Schact high-wheeled buggy driven by Applegate in the event for gasolene stock cars costing $850 and under, and naturally it attracted some attention. Applegate did not win the prize, although he reached the summit without faltering; the prize went to C. W. Mann, Buick, in 2:18. C. P. Brockway, driving an Overland won the event for cars between $850 and $1,250 by climbing the hill in 2:11. Mann was second and Stritzinger in a Mitchell third.

One of the most interesting events and one which brought out the high-powered and priced cars was that for gasolene stock cars over $4,000. William Borque, Knox, won out in 1:33, with W. J. Swain, Apperson, a close second in 1:37; George Davis in another Apperson, finished third in 1:38⅗.

Probably no driver at the meet felt more elated than Len Zengle when he won two brilliant firsts in the classes for cars from $2,001 to $3,000, and from $3,001 to $4,000. In the former event Zengle covered the distance in 1:36, and reduced this time by three seconds in the other event. Miller, in the Stoddard-Dayton, was the runnerup in both instances. The summaries:

Gasolene stock cars, $850 and under—Won by C. W. Mann, 18 Buick, time 2:18; second, J. F. Graham, 15 Ford, 2:24; third, R. S. Heebner, 15 Ford, 2:37; J. W. Lewis, 18 Buick, 2:59¾; B. Applegate, 14 Schacht, 3:41⅕.

Gasolene stock cars, $851 to $1,250—Won by Brockway, 24 Overland, 2:11; second C. W. Mann, 18 Buick, 2:16⅗; third, B. F. Stritzinger, 24 Mitchell, 2:31; Harry Greenwood, 20 Reo, 2:38⅕; H. W. Trump 22 Auburn, 2:44.

Gasolene stock cars, $1,251 to $2,000—Won by W. J. Hays, Jr., 35 Jackson, 1:53; second, Brockway, 24 Overland, 2:05¾; third, T. W. Berger, 35 Oldsmobile, 2:15; B. F. Stritzinger, 35 Mitchell, 2:26.

Gasolene stock cars, $2,001 to $3,000—Won by Len Zengle, 50 Pennsylvania, 1:36; second, A. C. Miller, 45 Stoddard-Dayton, 1:38⅖; third, W. J. Hays, Jr., 35 Jackson, 1:41⅖; J. J. Coffey, 29 Columbia, 1:46; L. J. Block, 40 Ford, 1:54; T. M. Twining, 50 Crawford, 2:05; R. H. Morris, 30 Acme, 2:07⅕.

Gasolene stock cars, $4,001 and over—Won by William Bourque, 30 Knox, 1:33; second, C. J. Swain, 55 Apperson, 1:37; third, George Davis, 55 Apperson, 1:38⅗; J. W. Parkin, Jr., 30 Packard, 1:48.

Gasolene stock cars, $3,001 to $4,000—Won by Len Zengle, 50 Pennsylvania, 1:36; second, A. C. Miller, 45 Stoddard-Dayton, 1:38⅗; third, Alan Wood, Jr., 40 Pope-Toledo, 2:10.

Free-for-all, gasolene cars of any price, flying start—Won by William Haupt, 50 Great Chadwick Six, 1:01; second, Bourque, 30 Knox, 1:15⅘; third, Albert Dennison, 48 Knox, 1:16; A. C. Miller, 45 Stoddard-Dayton, 1:18; J. W. Parkin, Jr., 60 Parkin, 1:18⅗; H. W. Harding, 60 Matheson, 1:19⅗; Len Zengle, 50 Pennsylvania, 1:20; Harry Gooden, 60 Stearns, 1:21; T. W. Berger, 40 Oldsmobile, 1:21⅗; J. J. Coffey, 29 Columbia, 1:23; C. J. Swain, 55 Apperson; 1:25; George Davis, 55 Apperson, 1:27; A. A. Jones, 15 Ford, 1:50.

Free-for-all, cars of all prices, flying start—Won by Willie Haupt, 50 Great Chadwick Six, 0:57⅗; second, A. L. Dennison, 48 Knox, 1:13⅖; third, tied, Harry Gooden, 60 Stearns, 1:16, and J. W. Parkin, Jr., 60 Parkin, 1:16; William Bourque, 30 Knox, 1:16⅖; A. C. Miller, 45 Stoddard-Dayton, 1:17; Len Zengle, 50 Pennsylvania, 1:18⅖; H. N. Harding, 60 Matheson, 1:20; T. W. Berger, 40 Oldsmobile, 1:22½; George Davis, 55 Apperson, 1:23⅘; C. J. Swain, 55 Apperson, 1:24; Jones, 50 Jones Corbin, 1:52.

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ROBINSON MAKES FASTEST TIME

Driver of Stevens-Duryea Car Hero of Rockville Hill Climb—Exciting Events Thrill Enthusiastic Crowds.

P. J. Robinson, driving a Stevens-Duryea "bix six" made the fastest time at the hill climb promoted by the Automobile Club of Rockville, Conn., on Tuesday afternoon, 30th ult., which meet was the feature of the Old Home Week celebration at Vernon. Robinson's time in the open for gasolene cars was 41 seconds, at the rate of more than a mile a minute for the distance of seven-tenths of a mile, and he won the free-for-all in 43⅘. The light six car of the same make finished second in the free-for-all in 49⅕, and ran third in the open for gasolene cars in 48⅖ seconds.

The meet was well conducted and the application of a special treatment for allaying the dust worked perfectly. The militia guarded the course and did their work well, as did the police with whom they worked, and the crowd though numbering several thousands, was easily manged. Not an accident occurred to mar the meet, as there were no bad curves on the course.

MacDonald started the ball rolling when he drove his little Maxwell up the incline in 1:21. Then came the Cameron car in 1:18⅘, but the crowd got its first thrill when a little Ford runabout went up in the remarkably fast time of 1:05⅗, figures that were not touched for three classes. Louis Elmer piloted the last named.

"Barney Oldfield" Peard, so-called because he always drives with the butt of a cigar in his mouth, started the event for cars between $851 and $1,250 by running his Overland to the finish in 1.20¾. Robert Miner, Buick, followed in 1:07, which won the event. The Cameron was timed in 1:10, and the Maxwell in 1:17. The next event was also for small cars and Elmer and his Ford carried off the honors, but his time was slower than in the first event, being made in 1:08⅗. The Maxwell did it in 1:13½, and the Cameron was timed in 1:14⅖. Claude Pinney in another Maxwell finished in 1:20.

The real excitement began in the event for cars between $2,001 and $3,000, when C. D. Alton, Jr., started things by driving his Columbia in 1:04⅘. Then came W. A. Bourque in a Knox, and when he whizzed up in 50¾, the crowd "Oh'd." Harry Tuttle followed in 54⅗, and a Buick in 1:07⅖, when S. A. Miner's Knox dodged below the minute again with 57⅘. Lorimer, in the Thomas-Detroit "Bluebird" got a noisy hand when he appeared to knock Bourque's time to smithereens, but he missed the mark by one-fifth of a second. Robert Ashwell took a pleasure trip up the hill in 1:15⅕, and Charles B. Tiley, in a car of his own make, was timed in 1:06⅖. Swan's Corbin made a fast run in 53 seconds, and W. T. Plimpton covered the distance between the tapes in 58⅖; he drove a Pope-Hartford car.

From point of rivalry the most exciting event of the day was that for cars from $3,001 to $4,000, as four cars—the Knox, Thomas-Detroit, Corbin and Stevens-Duryea little six—ran neck and neck and made, respectively, the times of 50, 50⅕, 50⅖ and 50⅗. Tuttle in the Stoddard-Dayton, was timed in 54⅕, and E. J. Blake's Pope-Hartford was caught by the timers in 59 seconds.

The free-for-all opened slowly with Seymour's Thomas in 1:01⅕, and Merten's Columbia in 1:03⅖, and Bourque caused a thrill when he finished in 50 seconds. Tuttle made the run in 53⅕, and Blake's time was 59⅗. All bets were off when the Stevens-Duryea "little six" then went the distance in 49⅕, and when Robinson followed in the "big six" of the same make, the country folk went crazy with the excitement. The time was 43⅘. The Corbin closed the event in 50⅖ seconds.

It was the last event of the day—the open for gasolene cars—in which Robinson made his phenomenal run and shattered all the previous times made for the climb. Robinson went so fast that he nearly slewed off the road at one place and he slowed for a fraction of a second, but his time—41 seconds—was the best piece of work at the meet. Bourque made a desperate effort but could do no better than 44⅕, while the other Stevens-Duryea got third prize in 48⅖ seconds. Two Corbins went up in 49⅘ and 50⅕, respectively, while O'Laughlin's Pope-Hartford and another Knox did 49⅕. The two Columbias did 51⅗ and 50⅕.

Chicago Club Declines to Secede.

Another demonstration of the sincerity of the "best wishes" which the Automobile Club of America tendered the American Automobile Association on its withdrawal from the latter organization, is supplied by the intelligence of its recent attempt to induce the Chicago Automobile Club to sever its connection with the governing body and join the outlaw movement. In response to the invitation, the Chicago club passed a resolution of non-acceptance, which was published this week in the following unmistakable terms:

Resolved, That the Chicago Automobile Club respectfully declines the invitation of the Automobile Club of America to withdraw from the Illinois State Automobile Association, and thereby from the American Automobile Association and to join with the Automobile Club of America in an effort to control American motor racing.

This is a second number in the program which was opened last week by the statement published in local papers to the effect that emmissaries of the A. C. A. (of New York City) were at that time in Louisville, Ky., endeavoring to procure the secession of the automobile club of that city from A. A. A. control.

SEALED BONNET CONTEST EASY

Sixteen Perfect Scores in Delaware Association Run—Minor Mishaps Eliminate Five Contestants.

Sixteen perfect scores by the 21 contestants entered was the record made by members of the Delaware Automobile Association in their first sealed bonnet run held last Saturday, 27th inst. The run was from Wilmington to Valley Forge, Pa., and return, a distance of 79 miles on a time schedule of 5 hours 42 minutes. The five cars that failed to finish were put out of the running only through minor mishaps.

The perfect scorers in order of finish were: Albert Rothschild, Ranier; James F. Hoey, Buick; Joseph H. Shaw, Franklin; Studebaker company, Studebaker; J. R. Richardson, Mitchell; James T. Chanler, Mitchell; J. R. Richardson, Mitchell; Eugene E. DuPont, Thomas; William H. Jones, Rambler; William E. Hilland, Ford; Robert R. Glover, Maxwell; Henry McComb Banks, Stoddard-Dayton; Dr. John C. Fahey, Maxwell; William C. Corey, Mitchell; Eugene DuPont, Peerless, and Eugene Du Pont, Pierce Arrow. Dr. Howell, Mitchell, and J. W. Matthews, Garford, were disqualified for breaking the seals. The points assessed against the unsuccessful contestants were as follows:

George A. Elliott, Pierce Arrow, 2 points; Dr. H. W. Howell, Mitchell, 86; John T. Thompson, Buick, 58; J. W. Matthews, Garford, 90, and LaMont DuPont, Packard, 17.

The weather was perfect and the conditions so easy that all but three of the cars arrived at Upland on schedule time of 50 minutes. The late arrivals were Elliott, Dr. Howells and La Mont Du Pont. At the second checking station at Valley Forge, the turning point, Dr. Howells was 27 minutes late, Thompson one minute, and Matthews 30 minutes late.

The tourists carried their luncheon boxes with them and lunched at Washington's headquarters at the old camping ground.

The return to Wilmington was accomplished without incident, the last car arriving before 4 o'clock. The Wilmington club, whose chief object in promoting competitive contests of the sort is for the pleasure to be derived from them by members, intends to hold another contest at a longer distance in August.

New Jersey Club Moves to New Home.

The New Jersey Automobile and Motor Club of Newark moved from their old quarters at Broad and Chestnut streets on Tuesday, 30th ult., into a spacious new club house on the corner of Park Place and East Park street. The new quarters contain the usual fittings and arrangements necessary to the comfort and convenience of automobilists when off the road.

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SHAPING UP FOR GLIDDEN TOUR

Chairman Hower Appoints His Officials—Entrants Anticipate More of a Contest Than in Previous Years.

With the approach of the date for closing the entries for the Glidden Touring Contest, which starts from Buffalo, N. Y., on the 9th inst., the organization of that event is fast assuming tangible proportions. Although the lists will close to-morrow (Friday), the number of entries received up to Wednesday night for the tour proper, totalled only 20, while 7 runabouts had been enrolled as contestants for the Hower Trophy. The usual "eleventh hour" rush of late entries, however, is expected to swell the list to more imposing proportions.

Chairman Hower of the touring board of the American Automobile Association, this week announced the names of the following officials who are to administer the contest under the superlative rule:

Dai H. Lewis, secretary of the A. A. A. Touring Board, in charge of the confetti and pilot car; E. L. Ferguson, starter; Mortimer Reeves, checker at the finish and in charge of night controls; F. D. Stidham, chief of observers; H. D. Herr, hotel arrangements; Devid E. Hoag, M. D., official surgeon; Arthur Jervis, press representative; W. L. Conklin and W. A. Carroll, watchers.

Observers will be carried this year, and this fact, coupled with one or two features injected with the revision of the rules and the nature of the course chosen, have led to the general conviction that the forthcoming contest will be far more rigorous than those which have preceded it. This sentiment is voiced by J. E. Walker, of the H. H. Franklin Mfg. Co., in explanation of the appearance of Franklin cars in the tour this year for the first time. "The reason we never made entries in these events before," he said, "was because we felt that generally it was more of a tour than it was a contest. We believe, however, that the machine that covers the course this year with a perfect score will be put to a severe test."

Despite the recent ruling of the A. A. A. barring women from competition in its racing events, the name of Mrs. Joan Newton Cuneo is likely to figure as conspicuously as heretofore in the reports of the contest, and her name already is enrolled. The Glidden contest not being regarded in the light of a race, the sex discrimination does not apply. That it will be entirely free from the racing element which has characterized former events which have borne the same designation, however, is not assured.

The final arrangement of the course leaves a total distance of approximately 1,700 miles to be traversed during the 15 days of the contest. In tortuousness, picturesqueness and difficulty of achievement, the route, which traverses seven different States, seems likely to prove at once the most difficult from the driver's standpoint, and the most enjoyable from that of the passengers, yet proposed for an event of this nature.

Many to Attend Good Roads Convention.

With 79 miles of modern highway in actual course of construction near the city, the delegates to the National Good Roads and Legislative convention to be held under the auspices of the American Automobile Association, in Buffalo, N. Y., on the 6th, 7th and 8th, insts., will be afforded an invaluable opportunity of learning the practical side of road making, which will be of immense importance to the users of the highways throughout the entire country. This demonstration will afford highway officers, contractors and others present an unusual object lesson for the work comprises the construction of highways of brick, macadam and gravel so that a fund of information covering the entire breadth of the subject of road building will be placed at the disposal of the 2,000 delegates and visitors for whom the reception committee have made preparations.

The convention has grown to proportions hardly expected by its promoters. Indeed, it promises to be an event of unusual importance to the community at large.

Delegates have been appointed by the automobile clubs affiliated with the American Automobile Association in a chain of organizations reaching from coast to coast,and representing the following cities: Los Angeles, Cal.; Newark, N. J.; Springfield, Mass.; Elyria, Ohio; St. Louis, Mo.; Wilkinsburg, Pa.; Philadelphia, Pa.; Chicago, Ill.; Bridgeport, Conn.; Wilkes-Barre, Pa.; Malden, Mass.; Washington, D. C.

The National Committee in charge of the convention consists of Robert F. Hooper, Philadelphia, chairman; ex-Governor N. J. Batchelder, of New Hampshire; Alfred Reeves, of the A. M. C. M. A.; William R. Hotchkiss, president of the A. A. A.; Charles Thaddeus Terry; James H. MacDonald, president of the American Road Makers Association, and Frank B. Hower. Co-operating with these committees will be the national officers of the three A's.

Rheineck to Pilot the Racing White.

Announcement of the retirement of Walter C. White from the list of racing drivers is followed by the naming of Walter Rheineck as his successor in the piloting of White steam cars in all contests of speed and endurance in which hereafter they may be entered. Rheineck for some time has accompanied White in his racing contests, serving as a mechanicien, but is said to have thoroughly mastered the problems connected with driving the White in competition contests; and, in addition, he is credited with the possession of the right quality of nerve.

ONLY FIVE ESCAPE PENALIZATION

St. Louis Reliability Run a Strenuous Contest Over Rugged Roads—It Develops a Hero and "Heroette."

Two candidates for Carnegie medals or some other kind of honors evolved from the second annual owners' reliability run for the Hagerman trophy, promoted by the Automobile Club of St. Louis last Saturday, 27th ult. One was a hero and the other was a "heroette." Oddly enough the "hero" was Chief of Police E. P. Creecy, the oldest entrant in the contest, who despite all kinds of trouble, finished the run That is why they speak of the Chief as a hero in St. Louis this week. The "heroette" was Miss Ida Britton, who drove a 50 horsepower Pope-Toledo over the tortuous course of 110 miles to De Soto and back, carrying seven persons, with a loss of only two points, inflicted for premature arrival at the first control.

Twenty cars started from the headquarters of the club between 8 and 9 o'clock in the morning, and of this number all but three finished the run, but three of the finishers were later disqualified. The run was not a parlor car ride by any means. At their best the famed De Soto roads are noted for their hilliness and are not easy to negotiate even when they are in prime condition, which certainly was not the case on Saturday. The rains had washed the notorious hills out until many of them were more like rocky gullies placed laterally than parts of the highway. The drivers were all amateur owners, men who do not sell, make or drive cars for money.

The reception given by the country people and citizens of the towns along the course was most enthusiastic. The farther south the tourists went the more enthusiastic was the reception accorded them. There were large crowds waiting at Hillsboro and when De Soto was reached a crowd of about 2,000 lined the streets.

After the cars had finished they were put under a thorough test and examination by the technical committee and it was found that Walter McKittrick, Locomobile; Samuel Plant, Packard; Charles E. Bascom, White; C. M. Barnard, White, and Ralph Smith, Matheson, had received no penalties. With the exception of this quintet the nearest to a perfect score was Miss Britten, who was penalized two points for premature arrival at the first control. P. E. C. Ball was penalized for arriving late at the first control, but he has protested the decision, claiming that the distance was improperly measured. He drove a White.

T. G. Sommermeier, Kisselkar, was penalized for stopping his engine and for inspections of this car and the committee found his brake test not as good as they thought it should be. J. E. Huiscamp,

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Ford, after making a satisfactory run until within a few miles of the finish, ran out of water and "froze" his motor. George Steffens stopped a few minutes to put a fan belt on his Cadillac and that knocked him from the perfect score division. Chief Creecy, Stanley, lost his way several times and a leaky engine packing caused him to lose many points. J. C. Graham, White, withdrew after finishing and did not go through the outside tests and examination.

If Dr. W. W. Graves had not been delayed 19 minutes with an overheated engine, he and his Ford would have gotten into the honor class, as otherwise he had a perfect score and the car survived the tests of the committee. M. F. Bingham, White, was dropped from the honor brigade just because he had assistance in getting water for his car, otherwise he would have had a perfect score. W. J. Kinsella put in a claim for the leather medal for the greatest number of punctures. Kinsella patched up eighteen of them before he decided to withdraw.

W. M. Grayson, Stoddard-Dayton, did not appear for the outside tests and for this he was disqualified, while Robert Walsh , Thomas, withdrew during the final tests. Previous to this he had been penalized 25 points. Edward Walsh, Packard, was penalized for an involuntary stop. These were all the finishers.

American Entry Regains the Lead.

America once more is in the lead in the "race" from New York to Paris. The Thomas car, as announced by cable from the Times correspondent, caught the German Protos on Monday, 29th ult., just before noon and passed the Teutons before reaching Kainsk. Shuster got the American car away from Tomsk at 4 o'clock Sunday morning, being then just fifteen hours behind the Protos car. The pursuit was over roads that at first were little better than a plowed mud field, but better roads were reached by afternoon, and Shuster determined to run all night if necessary to regain the actual lead, Miller relieving him at the wheel at intervals.

The German car was sighted ahead at 10 o'clock Monday morning, with a lead of only two miles. Then ensued an exciting race, Lieutenant Koeppen crowding his car to keep ahead, while Shuster was just as determined to pass his rival. When the American machine finally was right upon the German machine, Koeppen turned aside to allow it to pass, and the lusty shouts of the triumphant Americans elicited hearty responses from their rivals. The Thomas car arrived at Omsk on Tuesday making the run from Irkutsk to that point in four days less time that was required by Prince Borghese with the Itala car in the Peking-Paris race of last year.

By a special dispatch to a London paper on the 1st inst., the Italian Zust car was reported at Chita. It still is more than 2,000 miles behind the Thomas.

ZIG-ZAG CLIMB UP DODSON HILL

Kansas City Gets Satisfying Glimpses of Exciting Contests—Brooks the Only One Winning Two Events.

If the thousand and more spectators who stood around the Dodson hill near Kansas City on Saturday, 27th inst., had been in enough balloons to hold them and anchored about a half mile above the aforementioned hill they would have seen an interesting contest—the annual hill climb of the Kansas City Automobile Club. As it was, those who attended the contest had to content themselves with as much of a view of the event as they could get either from the start or finish because the road is so crooked that at no place is more than 100 yards of the route visible from the road. However, those who saw only the starts came away satisfied, and those who saw only the finishes equally were well pleased.

There was only one hitch in the program, While the contests were going on a man with a long beard and a determined manner insisted on driving up the road in a buggy. The guards intercepted him, but he was not to be detained.

"I'm a rural mail carrier and you can't stop me," he said. "If you don't let me pass I'll have the law on the whole lot of you."

The contest was delayed several minutes while he and his decrepit nag ambled slowly up the hill.

Honors were well distributed between all the cars except the Stoddard-Dayton driven by A. O. Brooks. He won two class events and in the free-for-all made the fastest time, covering the sinuous half mile in 59⅗ seconds. Fletcher Cowherd and his Corbin cars had hard luck from early morning. While practising on the hill his car bumped into another and the former was completely disabled. Cowherd borrowed another car and went into the free-for-all. He made a fast start, but suddenly stopped—he had forgotten to turn on the gasolene. In the second attempt something got into the carburetter and Cowherd gave it up in disgust. The summaries:

Runabouts costing up to $850—Won by S. H. Easterday, Ford, 1:36; second, J. A. Hilsman, Maxwell, 1:54; third, Harry Hathaway, Maxwell, 2:19.

Runabouts costing $851 to $1,250—Won by George Gibson, Reo, 1:35⅕; second, E. L. Weiant, Buick, 1:51⅕; third, William Davis, Buick, 1:52⅕; fourth, G. M. Breed, Buick, 2:46.

Runabouts costing $1,251 to $2,000—Won by E. Nason, Stoddard-Dayton, 1;31⅕; second, W. S. Hathaway, Maxwell, 1;32⅕; third, Charles Levendoski, Maxwell, 1:39⅖.

Runabouts costing $2,001 to $3,000—Won by A. O. Brooks, Stoddard-Dayton, 1:06⅕; second, Gordon T. Beaham, Pennsylvania, 1:34⅘.

Touring cars costing up to $2,000—Won by J. C. Powellesson, Jackson, 1:29⅖; second, C. J. Corkhill, Oldsmobile, 1:34; third, Charles Levendoski, Maxwell, 1:41; fourth, J. P. Ledwidge, Great Western, 1:43⅗; fifth, Harry Hathaway, Maxwell, 2:16⅕.

Touring cars costing $2,001 to $3,000—Won by E. L. Weiant, Buick, 1:13⅕; second, Don Cole, Oldsmobile, 1:15; third, H. Holxhauer, Pope-Hartford, 1:17; fourth, Joseph Matson, Corbin, 1:17⅘; fifth, Gordon T. Beaham, Pennsylvania, 1:47.

Free-for-all—Won by A. O. Brooks, Stoddard-Dayton; second, tie between Don Cole, Aldsmobile, and R. C. Greenlease, Thomas Flyer, 1:07; fourth, L. Scott, Stanley, 1:09⅕; fifth, E. L. Weiant, Buick, 1:13⅖; sixth, O. W. Hiatt, Buick, 1:18⅕; seventh, Charles Levondoski, Maxwell, 1:30⅕; eighth, G. M. Beed, Buick, 1:30⅖; ninth, W. S. Hathaway, Maxwell, 1:33⅕; tenth, Joseph Maston, Corbin, 2:54. In the runoff for second place the Thomas won in 1:08 as against 1:11 for the Oldsmobile.

Electrics—Won by Detroit, 2:35.

Scorcher's Confession Amazes the Bench.

Herman Kilpatrick, who can drive an automobile fast enough to take one's breath away, can tell the truth about it with a readiness that rendered Judge Fleming almost breathless in the Court of Special Sessions at Jamaica, L. I., on Tuesday, 30th ult. Justices O'Keefe and Ryan shared in his astonishment.

"This man, your honors," said Motorcycle Policeman Ennis, as he presented his prisoner, "was riding sixty miles an hour in an automobile on Hillside avenue on June 3, in the afternoon about 6 o'clock."

The Justices looked over their glasses at Kilpatrick, whose home is in Manhattan. Judge Fleming lives in Jamaica and does not like swift moving motor cars.

"Do you mean actually that he drove a car sixty miles an hour through a Jamaica thoroughfare?" he gasped.

"Oh, yes, your Honor," admitted Kilpatrick, "and then some. I was going a great deal nearer ninety miles than sixty miles."

Judge Fleming sat back in his chair and fanned himself. When he had convinced himself that it was not a sunstroke, but that a driver was really admitting running at a mile and a half a minute, he inquired into the circumstances.

Kilpatrick was the driver who broke all the world's records for road racing at Jamaica June 5 and 6. It was while trying out his car two days before the races that he was arrested. He explained to the court that in all other events the course had been open for trying out between the hours of 5 and 7, morning and evening, a few days before the races, and that he has supposed the same rules applied in the Jamaica races. Judge Fleming has a strong regard for a man who dares tell the truth, and he joined in voting to impose upon Kilpatrick a fine of only $25.

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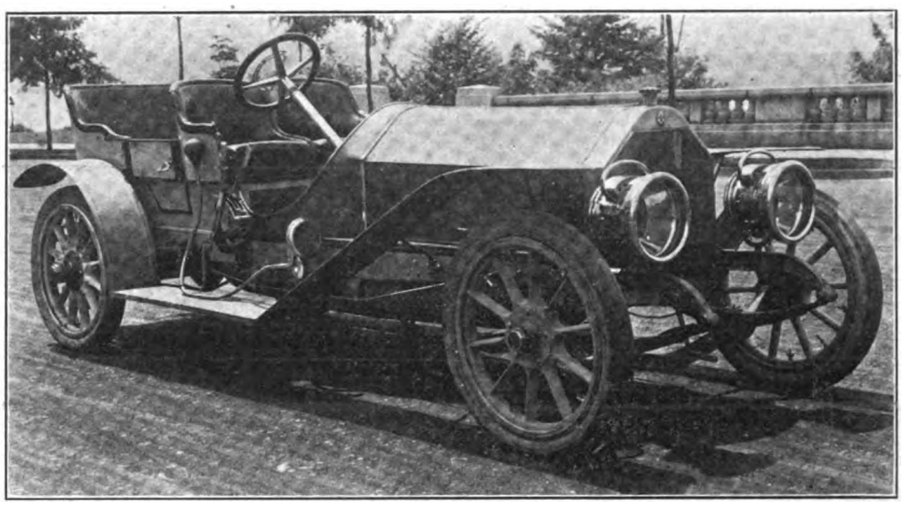
THE PALMER-SINGER "SIX-SIXTY"

New Model of Close-to-the-Ground Type Makes Its Appearance—Its Compact and Sturdy Power Plant.

If there is any truth in the notion that the speed of a car is indicated to a great extent by its appearance, then owners of the new Palmer-Singer "Six-Sixty" car never should have occasion to miss important engagements through lack of ability on the part of the car to cover ground at any speed which may be required of it in reason. The fact that its maximum speed is modestly alleged to be no less than 90 miles an hour, lends point to the conclusion.

Although announced prospectively some time since, the first of the new six-sixties has been on the road but a few days. As the accompanying picture indicates, it is of the close-to-the-ground type of fast cars, a goodly number of which are making their appearance this year. This means, that without sacrificing road clearance, the center of gravity has been brought low enough to make high rates of speed much safer than with the ordinary touring car. The sweeping fenders and low body construction, cut down wind resistance as well, while adding to the racy appearance of the machine, which is a substantial addition to the line of the Palmer & Singer Mfg. Co., New York City.

from the tank to the bearings, with pumped return from the crank case. The low lying manifold, leading from the carburetter without any appreciable length of uptake, is noteworthy, as is the arrangement of the Bosch Magneto and the wiring for the dual ignition system. As is implied by the designation of the car, the motor is rated at 60 horsepower. Its cylinder dimensions



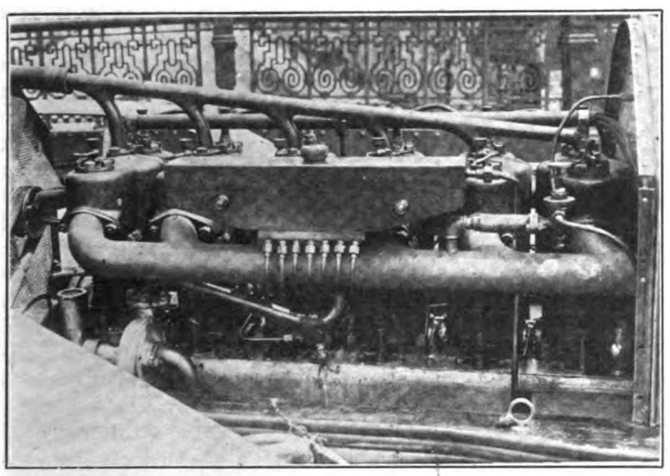
PALMER-SINGER "SIX-SIXTY"

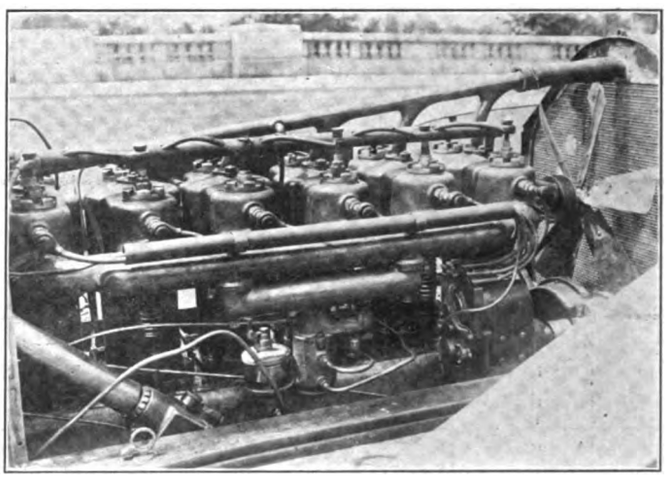
are 4¾ inches bore and 5 inches stroke.

Transmission of the power is secured through the medium of a multiple disc clutch, four-speed, selective type, change gear, fully enclosed cardan shaft, and full floating axle. The transmission parts are

2⅛-inch spokes of specially selected stock, and shod with 4-inch tires, front and rear. The suspension is by semi-elliptical springs, the front members being 34 inches in length, and the rear ones, 52 inches. The control mechanism includes the conventional steering wheel mounted, motor regulating levers, clutch and brake pedals, and an accelerator pedal, for convenience in handling under close traffic conditions. As shown in the illustration, the steering wheel is mounted on a column, well inclined, and is elevated sufficiently to give the operator ample mastery of the car, and a low racing position.

The chassis may be obtained with some





SIX-SIXTY MOTOR, SHOWING EXHAUST AND INLET SIDES

The compact and sturdy nature of the power plant is well illustrated in the views showing it from either side. Among the points which are at once observed are the compact arrangement of the oil tank on the exhaust side of the motor, which by the way, reveals in addition only the water circulating pump and the check valve for the pressure fuel feed, which is mounted on the exhaust manifold. The lubrication system, it should be observed, is by direct feed

universally mounted on ball bearings of the "F. & S." type. The brakes are all enclosed, and mounted in dust-proof cases on the rear wheels. Contrary to a custom which is pretty general, however, they are not of the expanding and contracting order, but are both expanding. Both sets are balanced by compensating levers, and they are applied by pedal and lever

The wheel base is 118 inches, and the wheels are 34 inches in diameter, built with

little variety of body mounting, all in line with its purpose as a road flier. With the plain runabout body, with single rumble seat in the rear, it lists at the $2,850 mark, which, considering the amount of high-grade material involved in its manufacture, is a figure worth noting. A double rumble for the rear, may be had at an advanced price, while $3,200 is asked for the light touring equipment with "baby" tonneau, shown in the picture.

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UNIT SYSTEM OF TRANSMISSION

Beemer Explains Its Saving of Power—Results of Test Experiments and His Deduction from Them.

Whatever may be said of the success of the motor car in a general way, the fact remains that a number of problems incidental to its design remain to be solved in a manner which is wholly satisfactory to the engineer. One of these is the transmission problem. Numerous attempts have been made to produce results which combine the desired flexibility and controlability with the reliability and simplicity which are absolutely essential in a motor car. Among these the so-called unit type of transmission is being accorded a growing amount of favor.

This system, in a word, involves the combination of the change speed mechanism with the live or floating type of axle, all enclosed in a single housing, which also forms the bridge or supporting member carrying the load of vehicle weight. With this arrangement power is carried to the group through a single cardan shaft, and but two essential organs are thus required for the power plant, namely the motor and axle unit, where three or more may be required with other systems. Speaking of its advantages, in a paper read before the Society of Automobile Engineers last week, Frank Beemer remarked that there are a number of reasons why this system should and does save considerable power. The first is, as he explains:

"That it requires but one universal joint, either single or double. This is one of the points which, most engineers agree, consumes considerable power, while the driving at various angles of the propeller or cardan shaft, through two or three universal joints, is also very undesirable. The transmission applied on the rear axle allows the universal joint to be placed immediately back of the clutch and a considerable distance forward of the point where it would be placed in a car, with the transmission carried on the sub-frame, thus reducing the angularity of the propeller shaft to a minimum, and in most cases bringing it practically on a straight line with the crank shaft.

"The transmission and differential mechanism being placed in a single housing makes it very easy to have it in perfect alignment; this is one of the features that has proven from all experiments to be the principal factor in the saving of power. It is quite necessary, and has been recommended by all ball and roller-bearing authorities, that to obtain the best results from the use of any type of anti-friction bearing it is absolutely necessary, that the bearings be in perfect alignment. This question has been taken up in a very practical way, and it has been found that the unit system of power transmission permits freer action to the bearings, thus reducing the effect of abnormal shocks and vibration to the bearings.

"The tests that have been made of this system of transmitting power show a saving of from 16 to 20 per cent. of the power applied, or, in other words, it utilizes this much more power at the driving wheels, in the ordinary designs, this amount being consumed by universal joints, angularity of cardan shaft, disalignment of bearings, and many other sources of imperfection which are more easily taken care of in the transmission type of axle than in the various types of plain axles commonly used.

"The automobile buyer of to-day in most cases considers very carefully the simplicity of the car, more than its style or appearance. He is not repeating the troubles which were experienced in the early days of automobiling, when many purchasers endeavored to secure a car which, in plain language, consisted of the greatest number of pieces for the money. It is a well known fact that where the acme of simplicity lies is the maximum of durability.

"The automobile equipped with the unit system of power transmission has been taken by many reliable engineers as a parallel to the direct connected power set or unit found in the latest power plants, having the engine, which corresponds to the automobile motor, and the generator, which is the equivalent of the transmission devices. This has been found to be the most practical and economical method of producing electricity, and it is this idea, carried out, as herein described, that forms one of the most economical ways of transmitting the power of an automobile motor to the road wheels through a system based on mechanical principles. It should appeal to most engineers as being one of the best and most practical methods of obtaining the result desired.

"The saving of power, as above stated, is based principally upon hill-climbing tests which were made with several cars equipped with the unit transmission system. I have been present at a number of these tests, and have driven some of these cars, which were equipped with the transmission on the sub-frame, and have noted carefully the working of all parts of the car. I have also taken the same cars equipped with the transmission axle and in repeating the same tests have found that there is a very considerable increase in both speed and ease with which the motor will handle the car on the same hills.

"I have also made certain speed tests with a car, with all parts in good condition. The motor at its very best was unable to secure on good roads more than 40 to 45 miles per hour, while the same car equipped with the transmission axle and with all conditions as nearly alike as possible would develop, with ease, 55 miles and even as much as 60 miles per hour. These and other efficiency tests tend to prove that the unit system of power transmission is without question one of the long-looked-for improvements in automobile design.

"There are a number of arguments advanced in favor of the side chain drive for heavy cars. A car equipped with this drive, all adjustments being as correct as they were intended to be by the designing engineer, will prove efficient to a certain degree. There are, however, a number of annoyances connected with this system of propelling a vehicle that are very unpleasant, the principal one being the noise caused by the chains. It is essential, in this design, to have what is commonly called a radius rod to insure the proper distance between the centers of the sprockets. These are frequently adjusted to different distances between the centers of the sprockets. These are frequently adjusted to different distances, causing the chain to ride on the side of the sprocket, adding undue wear.

"There are a large number of cars equipped with this system that are not provided with cases to protect them from dust and dirt, which quickly cause an extreme amount of wear, as the accumulation of dirt upon these parts absorbs the oil or grease used for lubrication, and it is only a matter of a short time until the correct pitch of the sprocket and chains are destroyed, and it is at this time that the greatest inefficiency must arise. I have also noticed on a number of chain-driven cars, owing to the improper adjustments of the radius rods, that the rear axle does not set square or at right angles to the center of the car, which causes friction and undue strains upon the bearings, sprockets, chains, as well as excessive wear on the tires.

"While we have a few of these discrepancies in the bevel gear drive, it must be conceded that all the gears and other parts of the construction are properly protected from dust and dirt, and that at all times it has a sufficient amount of lubrication, which not only adds to the life of the parts, but reduces the friction, especially when working under excessive strains. Quite a large number, if not all, of these imperfections have been overcome in the unit transmission system, and the last, but not least important feature of this system is the silence with which it transmits the power. I should say that it is physically impossible to obtain as quiet a running car with either the side chain drive or with a car equipped with the transmission on the sub-frame and using the plain type axle, as it is with the unit system as has been herein described."

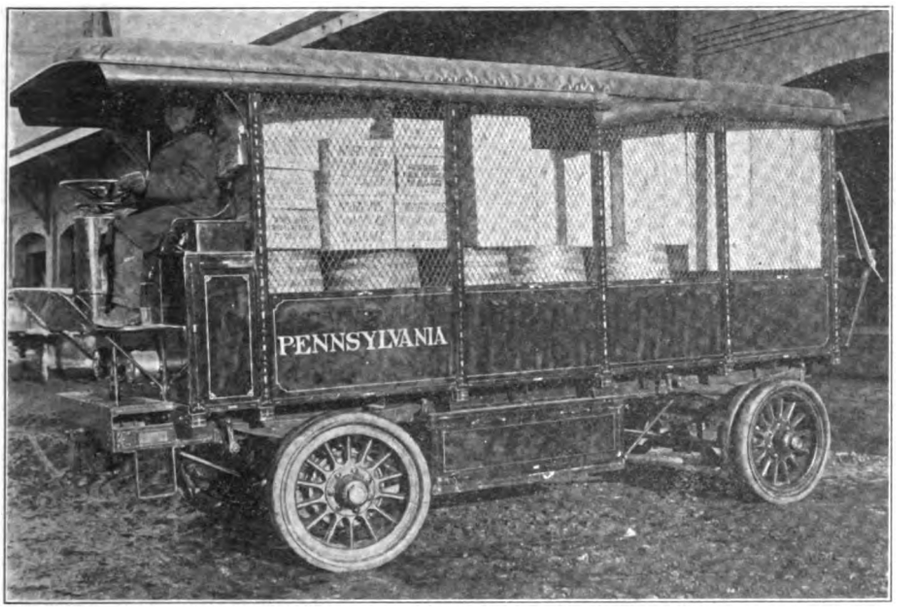
In overhauling the propeller shaft transmission, the torsion group should be carefully inspected. It is essential that the articulated and spring buffed supports for these levers be maintained in efficient and flexible condition. Should they be sprung, the resulting increased angularity of the propeller shaft joints would develop an undue amount of friction.

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AUTOMOBILES IN RAILWAY SERVICE

Pennsylvania System Trying Out Motor Trucks for Transfer Duty at Terminals —Large Saving of Time Effected.

Introduced experimentally for the purpose of expediting the handling of freight between the stations in large cities, the Pennsylvania Railroad Co. now is utilizing automobiles between the Kensington and Shackamaxon stations in Philadelphia. The railroad company intends to try the same experiment in other large terminal cities such as Pittsburg and Baltimore, and on the results obtained from the experiments at these points will depend the decision as to making this method of freight transportation a permanent adjunct of the railroad's freight system. At the present time there is but one vehicle employed in the service.



AUTOMOBILE TRUCK FOR TRANSFERRING FREIGHT

The automobile truck, which now is in use in Philadelphia, already has saved between six and twelve hours in the handling of package freight between the stations mentioned. The machine has a capacity of five tons and is driven by a six horsepower electric motor. The truck travels about 7½ trips a day carrying 2.2 tons per trip, its daily average being about 8 miles, or 132 ton miles of duty.

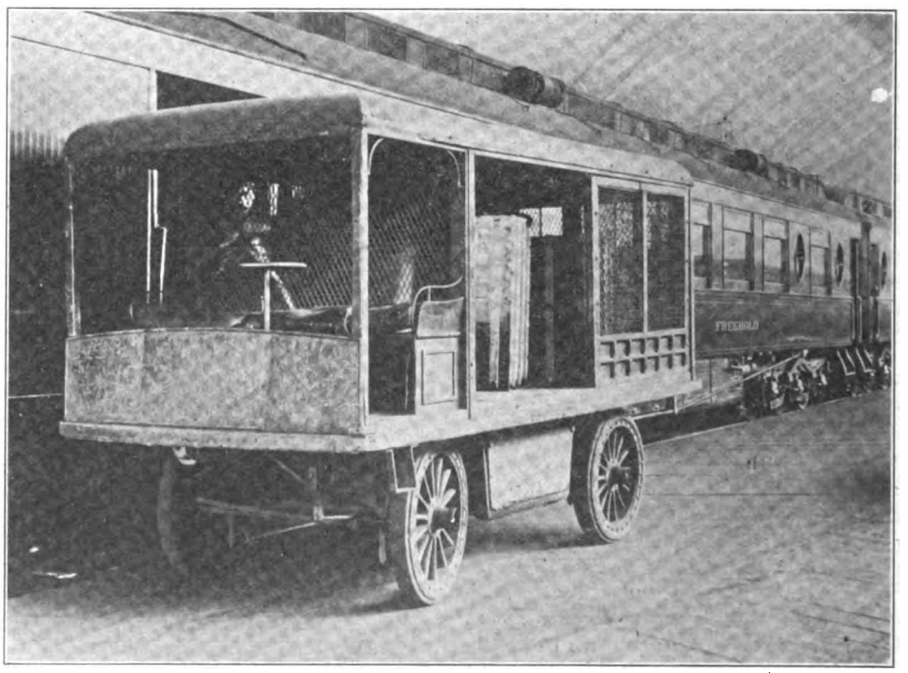
Until the automobile was introduced as a possible solution of the freight transfer problem in the Kensington district, small lots of freight were sent from station to station in cars. Already the employes of the freight department have seen that the automobile service has relieved much of the freight congestion which formerly handicapped the situation, the relief being due to the possibility of movement by a direct route instead of a circuitous one, resulting in a saving of both time and delivery and the use of freight cars.

The Pennsylvania also is bringing the automobile into use in its passenger service. In Jersey City an innovation is the introduction of large automobile trucks for use in connection with the handling of baggage. These trucks are about the size of a three-horse express wagon, having platforms of 5 by 15 feet dimensions, and are so built that when they are loaded, the floor of a truck is on a level with the floor of a baggage car. Incidentally the trunks handled in this way are saved many hard knocks during their trip, as the necessity for dropping them to the station floor or to the low platform of a hand truck and later throwing them up on to a wagon or car is obviated. In moving a trunk from the car to a truck it now receives about the same handling that it would get in being shifted about inside the same car. This simplification in handling is but one of the "trunk protective" features of the trucks. Another feature is that the trucks are enclosed with wire grating sides and leather tops, which prevent the trunks from scraping against the sides of the buildings or ferries or falling during the trip across the river. The frequent traveler is likely to appreciate the importance of the change should the automobile be adopted permanently for the handling of baggage and the process of "baggage smashing" thus be eliminated.

The service to which the new automobile trucks are being put entails their making through trips between the baggage cars and the Twenty-third street station in New York City. They are loaded to their full capacity and are raised and lowered between the ferry levels on elevators.

The electric power does away with the manual labor formerly necessary to push loaded trucks up the heavy grades at the approach to the ferries at certain conditions of the tide.

In the Broad street station, Philadelphia, smaller trucks, about the size and of much the appearance of the familiar hand trucks, are used for the transportation of baggage and mail. In these trucks the electric mechanism is placed under the body of the vehicle and is operated from the handle or "tongue." So satisfactory have these automobiles proved in the baggage and mail service, that a number of them are now being built for use in the new terminal in Washington.



AUTOMOBILE TRUCK FOR HAULING BAGGAGE

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PRACTICES THAT MENACE SPORT

Coler Discusses Unfair Competition and Erratic Decisions—Necessity for Uniform Rules Uniformly Enforced.

It always is somewhat difficult for me to speak of "sport" in connection with automobiling, because the utilitarian side of the motor vehicle appeals to me so strongly as to overshadow oft-times the uncertain and not infrequently undeserving element of sport, says Ernest Coler, in The Co-Operator, the Maxwell-Briscoe house organ, and yet it cannot be denied that contests have done a good deal for the automobile industry in calling public attention to the usefulness of what only a short time ago was called the new conveyance. Among such contests the endurance run has furnished the most eloquent proofs and permitted of the most far-reaching conclusions. Most readers will know that in nearly every endurance contest Maxwell cars have been winners. In a few instances they have been losers—good losers—when vicious roads, an unexpected skid or adverse circumstances of some kind or other have left a Maxwell car without an absolutely perfect score.

In making the automobile contest the subject of an article in The Co-Operator I desire to call attention to the somewhat unhealthy condition of the automobile contest and particularly of the endurance run, whose importance is too great to be threatened by the danger of having it turned into the semblance of a farce. In the early days of the endurance run it simply was a case of getting there; when the sealed-bonnet contest made its appearance the added difficulty only lent more zest to the strife and incidentally served as an excellent means to demonstrate to the general public the reliability of the motor car; when the successful completion of an endurance run was made contingent upon the rule that no adjustments whatever were to be made to the working mechanism, the frequency of perfect scores in such events only proved a further evidence of the automobile's value as a conveyance that was eminently fitted to be used by the average untrained operator.

The first requirement to be observed in any decent sport, and one that is generally heeded even in so innocent a pastime as the poker game, is honesty. But the participants in automobile contests frequently are actuated by anything but a desire to be obsolutely fair. Serious though this statement be, it is true and the fault lies not only with the managers of contests and their subordinates, but also with the manufacturers and dealers who enter cars. It is the custom, for instance, to place an observer on every car in an endurance or reliability run. The observer should be impartial, report every infraction of the rules, and subject the car to penalization, if deserved. But imagine a contest in which, as it happened not long ago, the distribution of observers was so skilfully and successfully juggled that a car entered by a well known manufacturer had for the official observer the best mechanic from his own factory, a man in his own pay and allegiance. What sort of a score could be expected from such a fraudulent combination, but a perfect one?

In a recent gasolene consumption contest Mr. C. W. Kelsey, who drove a Maxwell car, was approached by the official observer with the proposition to lend to him (the observer) a raincoat, in return for which favor he offered to permit the driver to take on a supply of gasolene sufficient to insure a fake victory. It is needless to say that the offer was declined with scorn. Mr. Kelsey prefers to win, and does win, "on the level," as every sportsman should make it his aim to do.

Two days after the last Vanderbilt cup race, in which Wagner and his Darracq won the much-coveted prize, it was discovered that the winning car was minus a differential and therefore had to be classed as a freak. Freak cars, according to the self-made and accepted rules of the managers of the race were barred from competition in the Vanderbilt cup event; yet the Frenchman had possession of the trophy, and so, as the best way out of the dilemma, the American managers simply reversed themselves by deciding that a car without a differential was no freak car, after all.

If you, gentle reader, were to take part in a contest of some kind, and if you were penalized one point simply because you had the misfortune to lose the stopper from the business end of your brandy flask—provided that this was your favorite tipple—would you not tap your index finger significantly against your forehead and look with fact-born suspicion upon the author of so assinine a decision?

This may be a somewhat far-fetched allusion, but it seems to serve as a striking illustration of the absurdity of the rulings and conditions under which some contests are decided. Some of these rules are of a most curious kind, little apt to be of assistance in disclosing anything except the peculiar mental state of the authors of the rules and the twisted view taken by them of things of which they themselves evidently possess no practical knowledge. If it had happened in the old bicycle days that a rider should be disbarred from the award in a century run or a road race simply because a spoke of the wheel had become unfastened, what would have happened? And now try to put yourself into the mental attitude of a so-called technical committee of a Pennsylvania motoring club, which decided that a car should be penalized for the loss of a tail pipe that was supposed to issue from the muffler, but didn't, because the car had been made without it, so that the car was in its original condition when it passed the expert gaze of these technical critics.

What is needed is a more uniform set of rules by which automobile contests are to governed. The Maxwell-Briscoe Motor Co. who no doubt have been the most prominent automobile concern in supporting the reliability contest, even to the extent of expending between $10,000 and $15,000 a year upon this most efficient form of advertising the road value of an automobile—are emphatic in their condemnation of the deplorable management of some recent competitions, one of the most flagrant examples of which occurred in Harrisburg, Pa., not so long ago, and partly inspired this article. I have no doubt whatever that the proper authorities will take this matter in hand shortly and if action should be delayed much longer it would raise the interesting question whether decisions in an endurance contest are to be governed by the approval or disapproval with which the judges view the curvature of the fenders, the style of the contestant's necktie, the cut of his shirt tail, or by a sportsmanlike consideration of performance and merit.

Ready Reference Handbook for Motorists.

To the novice in automobile matters who is desirous of learning just enough to enable him to run and look after his car without overburdening himself with technical knowledge, it is something of a cross to be forced to wade through a complete treatise on the subject, however well written it may be. Furthermore, few such books are adapted to ready reference use in time of need.

In "Care of Automobiles," which has just been issued by Doubleday, Page & Co., New York, Burt J. Paris has endeavored to bridge the gap existing between the makers' books of instruction and the full-fledged automobile educators, thus supplying the requirement of such an owner. He has succeeded in making a most readable little volume, which the publishers have produced in convenient size for the coat pocket, and printed without illustrations, in a clean style, quite in contrast to the formula and diagram bedecked pages of the conventional text book, and which, by the way, form its repellant feature to the layman. Subjects are indicated in a general way by sectional headings, and the matters treated are covered in a brief and sufficiently elementary manner to be of real value to the reader.

At the same time, not all the advice given is of first proof. Thus, the author suggests that a chain which has stretched beyond its normal length may be shortened by bending out every other pair of side plates. Those who have had experience in such matters, incline to the opinion that a chain which can be "sprung" in this fashion, will pull right back into its former condition, while the uneven pitch obtained by springing alternate plates, is distinctly bad. This, however, is an exception to matter which otherwise seems uniformly good.

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THREE NEW IGNITION SYSTEMS

Otto Heins Explains Their Essential Features—The Latest Dual Type and Its General Simplicity.

Three new types of ignition apparatus which have been introduced by the Bosch Magneto Co., within a comparatively short time, form the subject of a paper read by Otto Heins, in Detroit, at the meeting of the Society of Automobile Engineers, last week. One which is especially noteworthy comprises a low tension magneto with synchronus distributor and magnetic plug. The features and advantages of the regular low tension system are preserved, without the drawback of the external mechanism which that system requires, while its place is taken by a magnetic interrupter, which replaces the ordinary high-tension spark plug, and is hardly larger in size.

"An important part of this plug is the interrupter lever," says Mr. Heins, describing the essential features of the system, "which rests on a steel knife edge, and one end of which bears on the contact piece, which is screwed into the cylinder wall in the same manner as a high tension spark plug. At the bottom of the contact piece there is an insulated, fixed stem which is magnetically divided in about the middle by means of a brass part, so that when the current passes through the coil, only the portion of the stem above the brass part can be magnetized, and as a result of this magnetization, the upper end of the interrupter lever, which directly faces the magnetized part, is attracted, the lower end simultaneously breaking contact with the contact piece, thus interrupting the current and producing a spark. In the normal position of the interrupter lever, the lower end presses against the contact piece, being kept in that position by a horseshoe-shaped spring, which passes right over the top of the stem and lies in slots in the sides thereof.

"The top of the coil is fitted wtih a contact screw to which the current from the magneto is led. This magneto generates an ordinary low-tension current and is provided with a low tension distributor distributing the current to the individual plugs, according to the number of cylinders, so that only one low-tension wire for each plug is employed."

Of the method of connection, which is illustrated in the accompanying Fig. 1, he says:

"A portion of the wiring of the armature is short-circuited by the platinum points of the interrupter, and when the circuit is interrupted, the resulting armature reaction has the effect of raising the voltage of the armature sufficiently to operate the magnetic plugs. The rotating distributor bar is adjusted in such a way that it is always in connection with one of the spark plugs at the moment when the contact breaker of the magneto interrupts the circuit, so that the circuit to the plugs is closed and they are magnetized for operation.

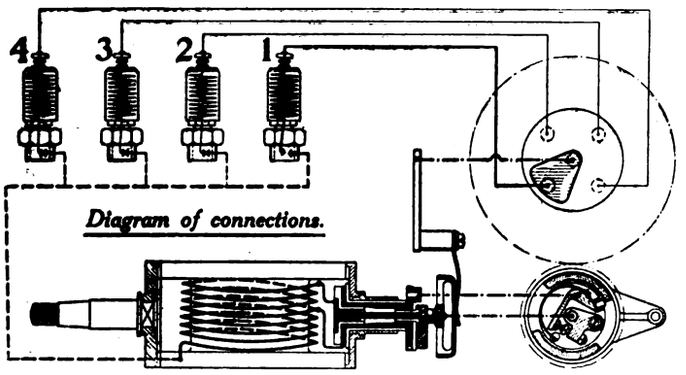


Fig. 1

"The spark is advanced or retarded by rotating the timing lever, in the same manner as with a high-tension magneto, and the timing range corresponds to an angle of 50 degrees on the armature shaft. The magneto is switched off in the same manner as a high-tension magneto, by making a ground connection. This is done by small plug switches with either a single plug or with a number of plugs equal to the number of cylinders, to enable each cylinder to be switched out separately for testing purposes, from the seat while the car is in motion. As compared with mechanically-operated igniters, electro-magnetic plugs are far simpler, and they are also far more convenient, because they require no separate adjustment, as they are operated by the magneto itself."

Because of the vast amount of attention which has been paid to methods of dual ignition within the past year or two, the most recently developed product of the Bosch Magneto Co., should be of especial interest. It is a high-tension magneto, accumulator and coil combination, perfectly synchronized, and noteworthy in that the single vibrator which is used when current is being taken from the accumulators, is employed only when starting the motor. At all other times, the interruption of the primary current is accomplished by a circuit breaker on the magneto, so that the element of vibrator and coil lag is entirely done away with. The general simplicity of the layout also is a commendable feature. In reference to the system and its accessories, the authority says:

"The high-tension magneto, or the generator itself, differs from the standard rotary armature type in two respects only. In the first place, the high-tension connections are slightly altered, and, secondly, an additional contact-breaker for the battery is provided, ... so that the magneto will serve also the function of a timer for the battery, while the one high-tension distributor of the magneto is used with both the magneto and the battery current. All other details of the magneto are similar to those of the ordinary machines, and it is therefore not necessary to describe them here.

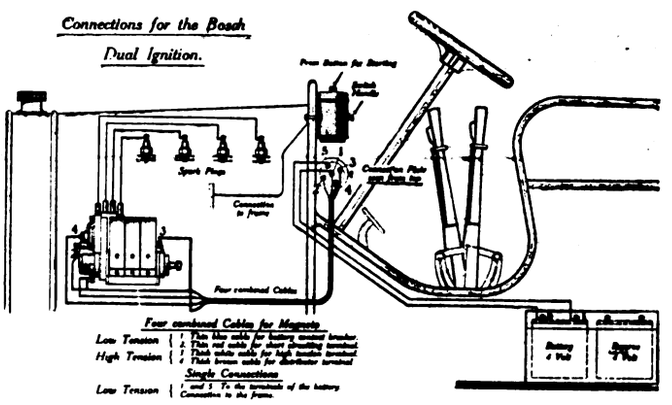


Fig. 2

"For the battery ignition a special coil is provided, with a self-contained switch and a button for bringing a magnetic vibrator into circuit when desired. These various parts are all contained in a relatively small brass case, designed to be fitted to the dashboard. . . . .

"Contrary to usual practice in vibrator coil ignition, the vibrator in this new Bosch ignition system is only brought into operation for the purpose of starting the motor from the seat. As soon as the motor is working, the vibrator is cut out and the interruption of the current is effected by mechanical means. Consequently there is no lag in the operation of the circuit interrupter, as in the ordinary vibrator coil system, thus making a synchronized system. If there is any gas in the cylinder, the motor can be started from the driver's seat by simply pressing the button. The coil is of the general form of an H armature, and not of the usual cylindrical form with concentric windings. It possesses the same amount of self-induction as the magneto armature, and while running the engine the two systems are absolutely synchronized, and no difference is apparent in the speed of the engine, whether the magneto or the battery is used.

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"The trembler is only used at the moment of starting. The button switch for bringing it into circuit is fitted in the lid of the case in such a manner as to render it quite waterproof. In order to eliminate all long connections between the switch and the coil, the switch is directly combined with the brass housing of the coil, the short contact studs being well insulated from each other in the base of the housing. The connections are made by small segments in the bottom plate of the coil frame, the entire coil being moved towards the left or the right to effect the change-over. The switch handle projects through a circular slot in the housing and locks in three positions by a spring, the positions being designated respectively, as 'Magneto,' 'Off,' and 'Battery.' The combination is very compact and can easily be inspected by unscrewing the switch handle and removing the lid, exposing the components of the switch.

"The casing or housing being watertight and made of metal, prevents the coil being affected by atmospheric conditions. No wood is used in the construction. The connections between the dashboard and magneto, as shown in Fig. 2, are made by one quadruple cable, which contains the two high-tension wires and the two low-tension wires. Standard magnetos can be adapted to this dual system by only small alterations."

As a result of the growing demand for cars of low and medium power equipped with high tension ignition, a new development of this type has been produced, which is intended for use upon motors up to 15 horsepower and of simple construction.

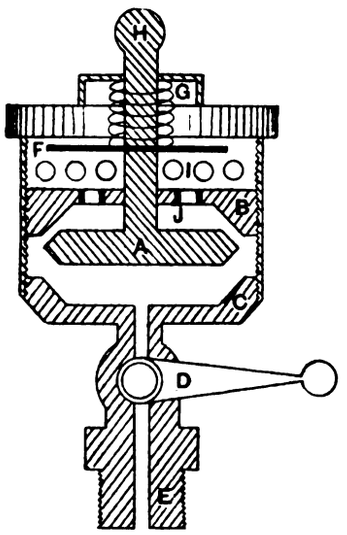
"The interrupter," says Mr. Heins, "is similar to the standard interrupter, but the distributor disc is of novel design and can be taken off with a jerk by pressing the spring on both sides. To simplify the ignition device, the magneto is generally furnished without any timing device. As these magnetos will generally be used on small cars driven by persons with no special technical skill, the absence of a timing device has the advantage that the engine cannot be abused by incorrect timing. The magneto, however, can be readily supplied with a timing device.

"On certain engines, particularly two-cycle and racing engines, an unusually large timing range is required. This necessitates the shifting of the magneto armature with respect to the driving shaft, which can be accomplished by a novel coupling device brought out by the author's firm. This coupling device can be attached to practically any type of our magnetos. It consists principally of two rotary sleeves. . . . . one fitting into the other, both provided with helical slots running in opposite directions, so that by moving the collar which carries pins which extend into the above mentioned slots, an angular movement of these sleeves relative to each other up to 60 degrees is obtainable."

AUTOMATIC COMPRESSION RELEASE

Simple Device for Relieving the Labor of Cranking—Its Action in Preventing the Dilution of Charges.

Generally speaking the automobile designer is content with providing pet-cocks in the cylinders for relieving compression in the motor when starting. In a few instances, means is provided for automatically releasing compression by a partial opening of the exhaust valves, the effect being secured by the act of engaging the starting crank itself. While occasionally provision is made for opening all of the pet cocks simultaneously by means of a special but-



ton or handle placed in the front of the radiator. That some automatic compression releasing device is possible as well as desirable, is perfectly evident.

Such a device was described recently in the Motor World as consisting of a cock of the ordinary type, except for a spring retained valve opening outward, and set to release at a predetermined pressure. The effect of this was to retain a certain amount of compression in the cylinder, and also to prevent any regurgitation through the valve as occurs with the ordinary pet cock, thus diluting the charge.

Somewhat similar in intent, but embodying one or two improvements, is a valve described in a recent issue of the Autocar, as here illustrated. Instead of a simple check valve with adjustable spring tension, this device has a double-seated valve, which is intended to close automatically whenever an explosion is secured, at the same time permitting the release of compression at any predetermined pressure when the motor is turned over by hand.

Its construction is perfectly evident. In order to put the device into operation the stop cock, D, must be opened. When this has been done and the motor is cranked slowly, the force of compression is sufficient to unseat the valve, A, from the seat, C, against the resistance of the spring, G. The spring is set ordinarily, to release at about 8 pounds per square inch. The gas at once escapes through the relief holes, I-J. The force required to turn over the motor is thus materially relieved, while a certain amount of compression is retained, and the automatic action of the valve prevents any induction of pure air from outside to dilute the charge.

When the first charge is fired, the force of the explosion at once drives the valve, A, the full length of its travel until it seats in the shoulder, B, thus practically sealing the cylinder. A very slight leak of gas is permitted during the travel of the valve, but except for this, the motor runs on practically the full force of the explosion. When the engine is running in this way, it is said that there is practically no clatter from the valves, despite their automatic action, and the power of the motor is practically unimpaired. After the cycle is taken up in the regular way, however, the cock, D, is closed, thus establishing the full performance of the motor. By lifting the knob, H, it is possible to inject fuel through the valve into the cylinder, as with the ordinary pet cock. The device thus in no way interferes with the working of the motor under ordinary circumstances, except for the very slight loss of power occasioned by the escape of a small amount of gas during the time between the unseating of the valve and its second closure of the cylinder at the end of its travel. Closing the stop cock in the base, prevents even this loss, and leaves the motor in perfectly normal condition.

To Keep Dust Out of Oil Reservoir.

As it is not always possible to obtain a strainer funnel at the time and place that the contents of the lubricating reservoir is being replenished, and as strainer funnels, even the very small ones, soon get into an oily condition which makes them undesirable to carry as part of the equipment of the car, some simple method should be employed by which the oil reservoir can be kept free of dirt or other foreign substances. A very simple arrangement to accomplish the purpose consists of nothing more than a piece of wire gauge rolled into tubular form of the diameter sufficiently small to permit of its being inserted in the filler hole of the oil reservoir. A ring should be soldered around the top of the gauze tube so that it will not enter too far into the tank. A bottom is soldered to the tube and when the completed screen once is inserted in the filled hole it remains there permanently, excepting when it becomes necessary to remove it for cleaning purposes. Such an arrangement will catch and retain pieces of waste, grit and other substances that would cause annoyance, if not indeed serious trouble should they find their way into the cylinder or come in contact with journals or wrist pins.

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MAY ESCAPE BETWEEN LAWS

Odd Point Raised in Rhode Island Prosecution—Immunity Claimed Through Repeal of Old Statute.

Somewhat involved is the legal issue that has arisen under the new Rhode Island law in connection with the case of Forrest G. Wilcox of Providence. J. Jerome Hahn, attorney for Mr. Forrest, has brought before the Superior Court the contention that the new automobile law prevents all prosecutions of automobile cases except those brought under the new law. The action taken in the case of the State vs. Forrest G. Wilcox on appeal asks for the dismissal of the case and the quashing of the complaint and warrant on the ground that the chapter of the Public Laws under which the complaint and warrant were brought alleging violation of its provisions was repealed by the Legislature at its last session and that no law now exists under which he can be tried on the charges set forth. The contention of Attorney Hahn is as follows:

"The defendant in the above entitled cause moves that it be dismissed and the complaint and warrant therein be quashed, because he says:

"First, That chapter 1157 of the Public Laws, passed April 13, 1904, under which said complaint and warrant was brought, charging him with the violation of its provisions as set forth in said complaint and warrant, was repealed by chapter 1592 of the Public Laws passed on the 26th day of May A. D. 1908.

Second. That no law now exists under which he can be tried, convicted and sentenced on the charge made and set forth in said complaint and warrant against him.

"Third. That no provision or provisions now exists in law whereby he can be sentenced for the violation of any of the provisions of said chapter 1157 of the Public Laws.

"Fourth. That no law exists whereby he can be held on the charges contained in said complaint and warrant."

The complaint against Mr. Wilcox alleges that May 28, 1908, Forrest G. Wilcox of Providence "did ride and drive an automobile faster than a common traveling pace on one of the said streetsof said Providence, to wit, Broad street, against the statute and the peace and dignity of the State."

It is held that by legislation automobiles have been placed in a special class of vehicles and that, therefore, a complaint in such general terms as "faster than a common traveling pace" is not specific enough to hold.

Cop's Legs as a Speedometer.

That speedometers and stop watches no longer are required in timing speeding motorists—at least in New York City, is the conclusion to be drawn from the testimony of Jost Ruth, a policeman who on Sunday last arrested Michael Coogan, a chauffeur, whom he charged with driving a car faster than 20 miles an hour through the streets of the city. When Coogan's case was heard in court, Officer Ruth testified that he had not timed the defendant by any of the usual methods employed by the police, but merely had run after him. The policeman swore that he could run a block in 10 seconds flat and that he had had to run two blocks before he jumped into another automobile and captured the speeding chauffeur. He based his complaint on the rate of speed at which he had run the two blocks. Ruth's method of timing was not approved by the court, for Coogan was discharged.

New York Registration Shows Decline.

Registration figures at the office of the Secretary of State at Albany show a falling off in the number of automobiles registered in the State of New York for the first six months of the current year. Up to July 1, 1907, there were 8,225 registrations, while the figures for the first six months of 1908 show a decrease of about 200.

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ABOUT THE ROTARY PRINCIPLE

Why Its Application in Engine Design Has not Proved a Commercial Success—Its Alluring Possibilities.

Every student of the steam or gas engine has, in all likelihood, fallen victim to the lure of the rotary motor at one time or another. Usually the particular arrangement of parts which attracts his attention is presented in a novel form which appears to be so very "new" as to promise as great things for the future as its inventor is certain it holds. That the rotary engine, by which is meant the type of motor in which the usual piston and connecting rod motion is dispensed with in favor of some other mechanism, is actually by no means a novelty, is explained by Professor C. Smith in the Autocar.

"The rotary engine occupies a position unique in the history of invention," he remarks. "For over 50 years it has received the attention of inventors, and no efficient engine has yet been devised. It is remarkable that a type of apparatus which has met with so little success should continue to be the object of such care and thought. . . . . The idea of the rotary engine is to arrange the piston or part acted on by power, so that a motion of rotation is communicated directly to the shaft, without the interposition of the familiar crank and connecting rod. The ordinary steam engine mechanism is admittedly a source of considerable loss of power, but not so great as some inventors seem to think. The loss is a friction loss, which generally has its counterpart in the rotary engine; the obliquity of the connecting rod produces a variation of torque in the crankshaft, but the variation is compensated, when necessary, by a flywheel.

"The obliquity is not the principal cause of any loss peculiar to the reciprocating engine; vibration and alternating stresses are the chief objections.

"The revolving cylinder engine must not be confused with the rotary engine. For the former there appears to be some future. Considerable attention is being paid to the details of its design. . . . . The air-cooling effect on the cylinder is admirable. A result of the rotary cylinders is that there is a flywheel action due to them, hence the extra weight of a fly wheel is saved. . . . .

"The steam turbine, though certainly a 'rotary' engine, is usually considered a thing apart, and is not classed among the machines known as rotary engines. With these latter there is always a part—an abutment—corresponding to the cylinder head of an ordinary engine, and against which the steam or petrol gas expands. The piston usually consists of a vane or block of variable shape projecting radially from the periphery of a drum mounted on the engine shaft. The whole is enclosed in a casing, there being an annular space between the casing and the drum. This space corresponds with the cylinder of the ordinary engine. On pressure being admitted, the piston block or vane is forced away from the abutment, and travels round in the annular space, thereby giving a motion of rotation to the shaft. It is clear that the power can force the piston round for a complete revolution, after which the piston will be again adjacent to the abutment, only now it will be behind it instead of in front of it. The piston must therefore, be got past the abutment in order that the rotation may be continued, and this operation the inventor accomplishes in an astonishing variety of ways.

"In one type of engine the abutment is caused to slide radially outwards out of the way at the right instant by a cam or other mechanism worked from the engine shaft. As soon as the piston block has passed the abutment is brought back into place again, steam is admitted as before, and the motion is continued. . . . . In another type of rotary engine the abutment is made to rotate. It takes the form of an equal armed cross or star, mounted in such a way that the arms project successively into the annular cylinder. The piston block strikes the arm which for the time being is acting as the cylinder head, and causes the abutment to rotate about its spindle. The arm in front of the piston moves out of the way, and the next arm comes down behind the piston to act in the function as a cylinder head for the next stroke, and so on. A great number of modifications have been suggested, especially in the shape of the abutment and in the manner of its rotation. Sometimes it is rotated by cams on the shaft, and very frequently it is made to act as cut off valve in addition. . . . . There is yet another common form of engine possessing a movable abutment. This time the abutment is actually hinged at one end to the outer casing, while the other end bears upon the internal drum from which the piston block projects. As the block comes round it pushes the hinged part more or less gently out of the way.

"In all the types considered up to the present the abutment is withdrawn at the proper instant from the approximately circular cylinder, but in another very wide class the abutment is fixed, and the piston block itself is caused to get out of the way at the right instant. Evidently the piston block cannot in such cases be a fixture on the internal drum. The most obvious way of effecting its disappearance when required is to arrange for it to slide into the drum just as in the other case the abutment slid outwards. The piston vane is forced inwards by the inclined faces of the abutments or by suitable cam gear, and springs are generally set in the slot in the drum to force the vane outwards during the ordinary part of the revolution.

"These are the main types of rotary engines. though many peculiar constructions which do not come under these heads have been proposed from time to time. The so-called spherical engine, for instance, is perhaps one of the most ingenious pieces of mechanism ever devised for the development of power. Description is practically impossible without reference to models or drawings. It will suffice to say that the steam 'cylinders' usually take the shape of segments of oranges, and that a disc wobbles about in them in a wonderful manner. The motion of the disc in some forms of the engine is exactly reproduced in the motion of the middle part or cross of the coupling known as a Hook's joint.

"The idea of a rotary engine is attractive at first sight, and one can understand the enthusiasm of the inventor whose engine, according to his expectations faithfully reported by non-technical writers in the daily press, is to revolutionize the industry in some or all of its branches. But it needs only a moment's consideration of the mechanical difficulties in the way to realize why these engines have so far been commercial failures, and why they are forever likely to remain so. The wear and tear at the abutments and piston parts is enormous, and is increased by any mechanical constraint designed to remove the uncertainty of action of these parts. Rotated at low speeds, each piece of mechanism will very probably give satisfaction as a pump or blower, but in a prime mover we must have a fair speed, and little wear and tear as well as a low steam consumption. . . . . In spite of all this, the flood of invention in this direction increases year by year. The present tendency is to simplify the parts and modify the engines for working with petrol, etc., but with the steam turbine giving such satisfaction and the gas turbine looming ahead it seems a waste of ability to seek to introduce rotary engines."

How to Test the Manometer.

Whatever advantages are to be derived from the use of the manometer, or gauge for determining the rate of water circulation in the cooling system, are set at naught if the gauge fails to register accurately. This may occur when the tubing by which it is connected to the water piping leaks, or is badly kinked at some point, when the tubing is clogged, or when there is some internal flaw in the device itself. A simple test which may be employed when the correct indications for any given speeds are known, is to apply a revolution counter to the end of one of the cam shafts, running the motor at various speeds, and simultaneously observing the indications of the gauge. If the latter correspond to double the speed of the sam shafts, they are sensibly correct. If not, the device should be adjusted properly, where adjustment is possible, or else a new dial made, providing it is not possible to effect the desired result by the easier method of shifting the old one.

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"DOING OVER" THE RUNNING PARTS

Practical Suggestions for the Preparation of New Surfaces — Materials and Methods for the Finish.

It is easy enough to order a much used and seedy looking car to be "done over," but as a rule the owner has small conception of the amount of labor and pains which must be involved in doing a really creditable job under the circumstances, while many a professional painter is more or less at a loss to know how to set about it to get the results which are expected in such cases. In respect to the treatment of the most difficult part of the undertaking, namely the renewal of the running gear, the Carriage Monthly furnishes some advice.

"The cracked and fissured automobile body is concededly a difficult bit of work to make really presentable short of burning off the old paint and resurfacing anew, but the ring-cracked and alligatored running parts are quite on a par with the body of like condition in the matter of downright hard work and good skill in bringing up to a satisfying finish," says this authority. "The first and most important move following the washing of the parts, cleaning off the grease, etc., is to scrape away all the fractures, uproot the splinters and knife out the gouges in which shivers of wood prick up to smite the hand of the workman. This, of course, can best be done with steel scrapers, sharpened to a keen edge on one side, with wood handles affixed. We have for this purpose often used mowing machine knives, and, in fact, they make most excellent scrapers, although somewhat tiresome to handle. In city shops, this scraping and sandpapering of the running parts is accounted a particularly nice sort of work. Usually some one unusually interested in this class of work is put in charge of it and becomes expert in it.

"At this stage, it fairly goes without saying, the whole issue of the case depends. As one of the best foremen painters of Manhattan recently said, 'Both the character and durability of the finish depend more upon this primary surfacing than upon any other single operation.' Face and back of felloes, front face of spokes, sharp edges on hubs, if any exist, face of axle bed, side bars, etc., are parts of the surface demanding particular attention. All such spaces, and, indeed, all spaces, need to be worked down until the wood fiber lays low and clean and perfectly free from any stringy substances. And of the sandpapering it need merely be said that this should be carefully and skilfully done. Everything of a loose or shelly nature should be torn away and removed under this scraping and sandpapering attack, so that at the termination of it nothing remains which can disturb or unseat this structure of pigment built upon it. Thorough scraping and sandpapering goes far towards removing the necessity of much puttying of the running parts, a fact in itself important to consider.

"The surface being fitly prepared to coat upon the next step consists of either using for a first coating some one of the many well-accredited running parts, surfacers, or straight lead compounds made up in the shop. And in respect to the shop-prepared pigments, it may be said that for impalpable fineness of atoms, softness of texture, and capacity for penetrating the crevices, and surfacing up rich and velvety under the sandpaper, and for general excellence as a supporting pigment, nothing equals white lead of approved quality. For this initial coating make it to a camel's hair brush power consistency in one part pure, raw linseed oil and three parts turpentine. Permit this coat to dry 72 hours, and then over the coarse eaty patches of surface glaze with a quick-drying putty cut to the desired consistency with turpentine, using both an ordinary putty knife and a full elastic French scraping knife. This glazing putty will dry sleek and hard, and sandpaper to powder, in 36 hours. Then with the quick-drying putty fill smoothly all cavities and gouges. After another 36 hours sandpaper the parts uniformly, without cutting through, and coat with a second application of lead made by the addition of one part oil to five parts turpentine. For a strictly high-class job, add, after again sandpapering a third coat of lead, carrying one part oil to ten parts turpentine."

What Determines the Motor's Speed.

Curiously enough, one of the most puzzling questions in connection with the operation of the gas engines, is that relating to its speed. Just why one engine should develop its best performance at a rate of revolution nearly twice as great as that required for another affording perhaps the same horsepower, is difficult to understand, even when the sequence of the cycle itself, is well known. The whole matter reverts to the original design of the motor. Just as a man with long legs, takes fewer steps and longer steps than a man with short legs, when both are of the same weight and traveling at the same speed, so two engines of different design though producing the same power output, may do so at different rates of travel. Just how the differences are brought about from which these effects are developed, is entirely a different matter. The analogy is a simple and helpful one to remember, however. In this connection it should be noted that the high speed engine is designed with extremely light working parts, perfectly balanced; and that its proper working demands a great number of relatively light impulses in order to produce its output. The slow-speed motor on the other hand, may be less accurately balanced, but requires far heavier working parts because of the relatively heavy explosion pressures with which it deals.

ADVANCED TYPE OF FIRE FIGHTER

Hollywood, Cal., Gets the Latest Ideas in Its Automobile Chemical Engine— Features of Construction.

While automobile fire engines in various forms have come into use in many cities throughout the United States, during the past year, what may be termed the most advanced type of automobile chamical fire-fighting apparatus recently has been purchased by the city of Hollywood, Cal. The vehicle is comprised of a well designed body, mounted on a special Tourist chassis. The motor is of 4 cylinders, developing 50 horsepower; selective type transmission, and two ignition systems.

The fire fighting equipment consists of a 40-gallon chemical tank of heavy copper placed crosswise on car under the driver's seat; 100 feet of ¾-inch four-ply chemical hose coupled to automatic reel with ¾-inch Larkin nozzle; two 3-gallon regulation fire extinguishers, 2½-inch hydrant connection for 2½-inch fire hose; four 9-foot ladders specially fitted to connect into one 36-foot ladder; a full complement of lanterns, crowbars, pickaxes, plaster hooks, etc.

The main body of the car is of steel, designed to carry 800 feet of 2½-inch fire hose. There are two alarm bells on the wagon. One is a large pivoted fire bell which can be operated either automatically or by a man on the footboard. The other is a 12-inch electric gong on the dash which is rung by a switch connected with the storage battery.

The lighting system consists of two large gas headlights and a central gas search light, the latter so arranged that it can be turned back, illuminating the entire outfit when car is at stand still.

The weight of the outfit, with tanks filled and including 800 feet of two and one-half inch hose, driver and five men, is 6,000 pounds. The lightest steam fire engine, weigh about 7,850 pounds and some of the heavy types, now in use weigh over 10,000 pounds. Its speed on the level is 45 to 50 miles per hour; it is geared to negotiate almost any grade.

The car will be housed at Hollywood in a specially designed building wherein the car rests upon an inclined plane facing the door. Upon alarm, the driver from the seat, releases chock block, opens the throttle and the car by descending the incline, starts the motor.

Adjusting Steering Gear for Lost Motion.

In adjusting the steering gear for lost motion, care should be observed, lest the parts be set so close as to bind. After completing adjustment, the gear should be tried through its entire "lock" to make sure that the alignment is perfect. If not, binding will occur.

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The Week's Patents.

885,886. Hydrocarbon Gas Generator. Olva D. Sumner, Chicago, Ill., assignor to Acorn Brass Manufacturing Company, Chicago, Ill. Filed May 28, 1906. Serial No. 319,160.

1. In a gas generator, the combination of a continuously ascending generator coil, a member supporting the lower end of said coil and having a liquid fuel receiving chamber provided with independent inlet and discharge valves, said discharge valve supplying fuel to said generator, a mixing chamber at a higher level than said coil and receiving the hydro-carbon vapor therefrom, a burner beneath said generator and a supply pipe connecting said mixing chamber with said burner.

885,888. Concave Vehicle Tire. Arthur G. Thomson, San Francisco, Cal. Filed Oct. 29, 1906. Serial No. 341,079.

1. A wheel tire composed of a plurality of separable independent counterpart sections, each section comprising a body having a tongue projecting from one edge thereof, and a tongue of equal length but of less thickness projecting from the opposite edge, the said tongues constituting a part of the sides of the tire with the end of one tongue at a reverse incline to the end of the other tongue.

885,894. Ignition System for Explosion Engines. Richard Varley, Englewood, N. J., assignor to The Autocoil Company, a Corporation of New Jersey. Filed Nov. 17, 1906. Serial No. 343,833.

1. In an ignition system for explosion engines, a shaft having a sleeve angularly adjustable thereon, a plurality of rollers carried by said sleeve, and metallic conductors concentric with said shaft in the path of said rollers, certain of said conductors being connected into the primary circuits of a plurality of induction coils to periodically interrupt such circuits when the engine is running and centrifugal means co-operating with the remaining conductor to permanently interrupt the circuits when the engine is at rest.

885,921. Gas Engine. Chester Griswold and Sylvester G. Averill, New York, N. Y. Filed Dec. 21, 1906. Serial No. 348,863.

1. The combination of two gas engine cylinders and, associated with each cylinder, a piston and a compressed air chamber in the cylinder base receiving said piston, a crank shaft common to both pistons passing through said compressed air chambers and having its crank in one chamber set 180 degrees distant from the crank in the other chamber, an air inlet valve in each cylinder head, ducts connecting the said air chamber associated with each cylinder with the air inlet valve of the other cylinder and means actuated by said crank shaft for operating said air inlet valves.

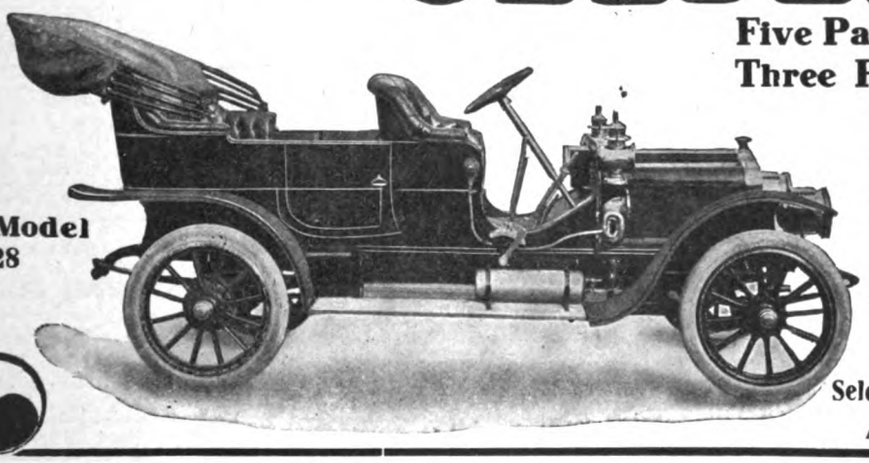
885,938. Friction Clutch. Frank Maxant, Allegheny, Pa. Filed April 25, 1907. Serial No. 370,159.

1. In a friction clutch, the combination with a driving shaft and a flanged pulley thereon, of a driven shaft provided with a circular carrying frame, pairs of levers pivotally mounted for operation in said frame and provided with gripping shoes engaging the inner and outer sides of the flange of the driving pulley, a pivotally mounted actuating lever having integral oppositely disposed arms connected by links to the terminals of said levers and provided with a backwardly extending arm having a bearing roller, and an actuating cone slidingly mounted on the driven shaft and arranged to engage said roller, substantially as set forth.

885,940. Steering Gear for Automobiles. Grove E. Miller, West Detroit, Mich. Filed May 18, 1907. Serial No. 374,361.

1. In a steering gear, the combination of a driving screw member, a driven screw member, a clutch connection between said members, nuts mounted on said screw members, a bearing block arranged between said nuts, a rock shaft connected with said block and means for compressing said block between said nuts.

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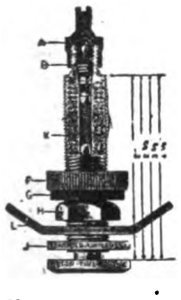
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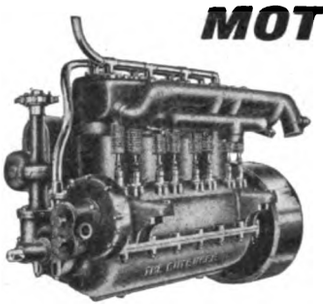
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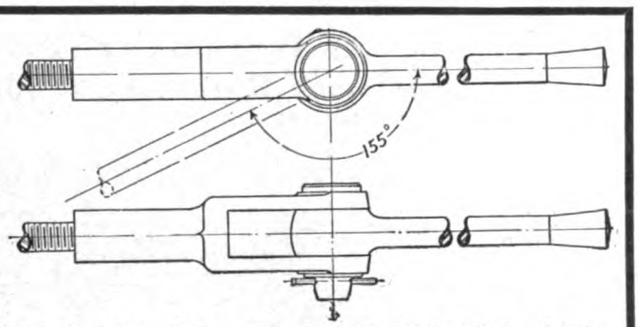
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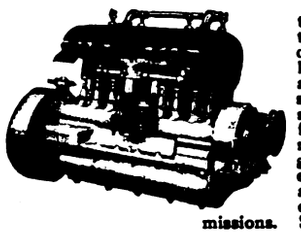
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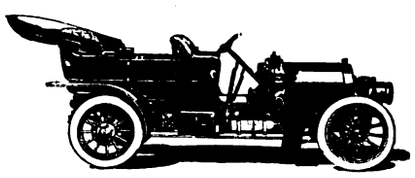
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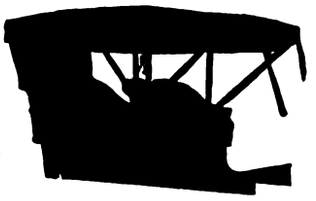
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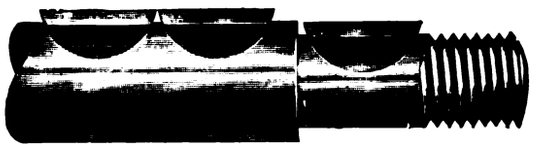
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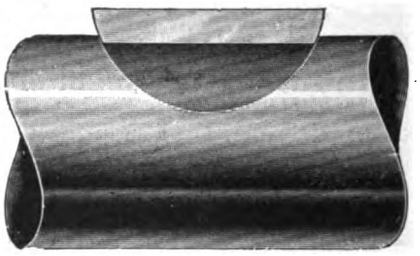
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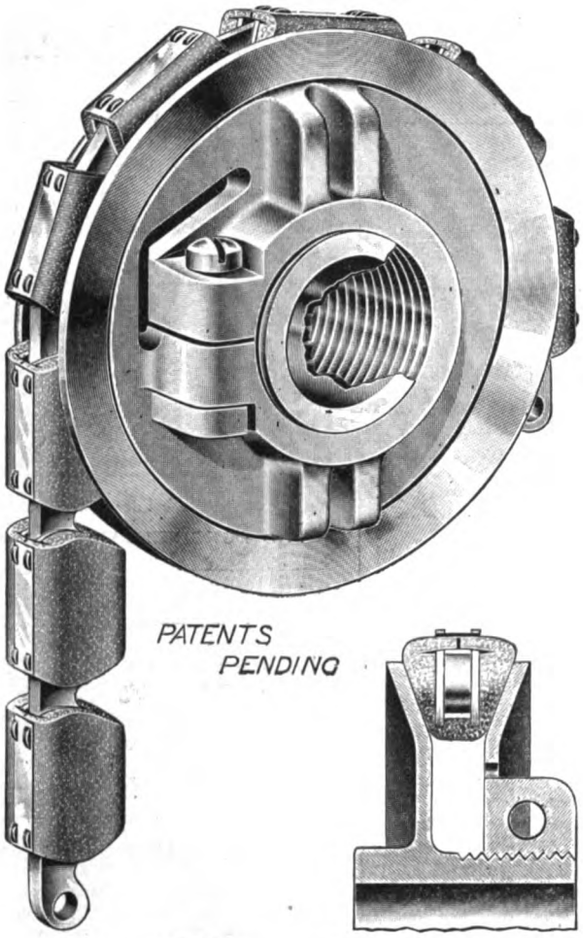
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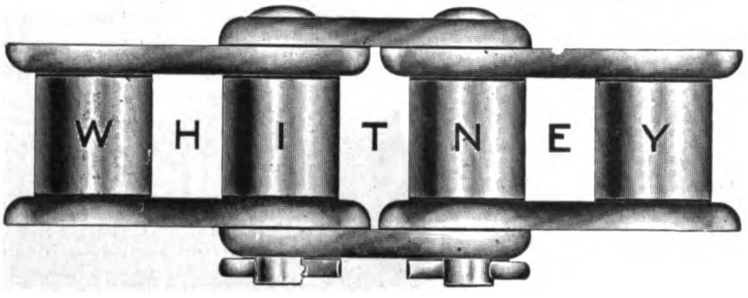
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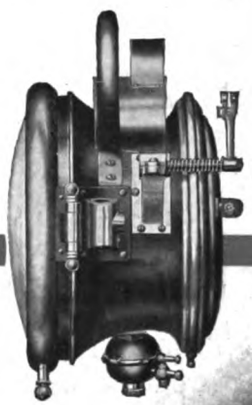
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light the road with two distinct brilliant fields for light. One penetrating the darkness for one thousand feet ahead (road use), while the other is thrown directly in front of the car (city use).

The long distance ray may be instantly "eclipsed" and entirely suppressed through the simple manipulation of a dashboard switch. The driver at all times has perfect control over the light given by the Lamps and may reduce their power and modify their brilliance at will.

All Solarclipse Lamps are produced under the patented Besnard System. They are fitted with Special B & L Solar Lens Mirrors.

Complete description of this wonderful Lamp in our 1908 catalog. Sent free upon request.



Badger Brass Mfg. Co.

606 Lyman Avenue, KENOSHA, WIS.

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"Hartford Tires Run Fast and Far"

One of the best things about Hartford Tires is that most of the good things said about them are said by enthusiastic users.

HARTFORD TIRES



"The tire with the doubt and the risk left out"

TRADE MARK

Here's another typical letter that contains real "meat" for the man who buys the tires:

Atlanta, Ga., June 5, 1908.

Mess. HARTFORD RUBBER CO.,
Hartford, Conn.

GENTLEMEN:--Last August, I bought a 4-cylinder Pope-Hartford Touring Car, equipped with your Hartford Clincher tires. Since then I have run the car about 7,000 miles and two of the tires are still good. The other two were worn out in running the car back to town after having bent an axle in an accident. But for this I would still be running the same tires put on at the factory. These tires were on the car when I won the Inman Cup in the hill climbing contest --making the fastest time of any touring car in the race. In fact, they have seen fast running every day.

Hartford Tires will run fast and far.

Very truly,
J. H. SMITH, 320 W. Peachtree St.

Our trade marks, reproduced in this advertisement, are your protection and your guarantee of genuine tire satisfaction.

HARTFORD RUBBER WORKS CO., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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1909 FOUR-CYLINDER

Stevens-Duryea

MODEL X

In bringing out this new model we do not in any way retract any claims that we have made for the six-cylinder car which we are firmly convinced is the highest type of automobile construction. In response to a demand for a larger and roomier car than our twenty horsepower four-cylinder Model R, and more moderate in price than our Light Six, we have produced the Model X. This model supplies a demand for a four-cylinder car a little larger and more powerful than the Model R, which has been discontinued. The owner of the Model X can feel that the well-known features of the Model R are embodied in his car, together with the advantages of more room and power. In brief, the Model X is an enlargement and refinement of the Model R, representing the most advanced ideas in automobile designs, together with Stevens-Duryea construction and workmanship, which have been proven absolutely correct.

The Unit Power Plant
AND
Three-Point Support

This construction, which has made the name "Stevens-Duryea" synonymous with motor car efficiency, is retained. Stevens-Duryea cars were built on correct principles in the beginning, and at no time have any radical changes been made in their design.

4¾-INCH BORE. TIRES, 34 x 4 INCHES.
4½-INCH STROKE. WEIGHT, 2,650 POUNDS.

For detailed specifications send for catalog.

Price **$2,750.00**
Folding Top with Side Curtains, Storm Front, Celluloid Windows, and Slip Cover, extra $150.00
Magneto, extra 200.00
Chassis 2,500.00



Stevens-Duryea Company

Member A. L. A. M.

690 Main Street, CHICOPEE FALLS, MASS.

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AJAX WRAPPED TREAD TIRES

After all is said
and done,
no matter how
glowing
the promises of
tire makers,
the only thing you have
to tie to
is
the word
of the dealer who
sells you.

If the tire
goes bad
you have the privilege
of carrying on
one end
of a controversy
with the factory—
that's all.

The tire maker
makes good—or doesn't
as he sees fit.

There's one exception—
AJAX—

Every AJAX tire
is guaranteed
for 5000 miles.

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.
BRANCHES:
New York, 1776 Broadway
Boston, 819-a Boylston St.
Chicago, 1418 Michigan Ave.
Detroit, 743 Woodward Ave.
Denver, 1529 Cleveland Place
Seattle, 1102 Broadway
San Francisco, 460 Golden Gate Ave.
Los Angeles, 1040 S. Main St.
Agents in all large cities.

The Auto-Meter Is Believed

Every big motor event that has taken place in the past three or four years has seen more Auto-Meters in evidence than all other makes of speed indicators combined.

In the Glidden Tours the number of Auto-Meters used by contestants doubled and tripled all other makes put together.

In the New York-Paris Race the only speed indicator is a Warner on the Thomas car.

Nearly all the automobile manufacturers of the country use the Warner to test out their cars before they leave the factory.



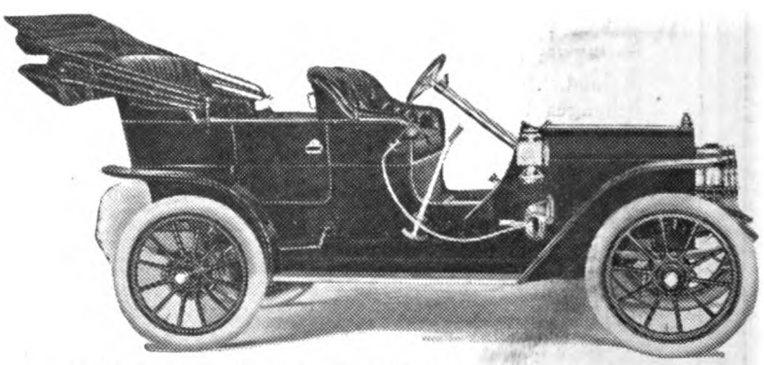
Two of the most successful makers are including the Warner as part of their regular equipment.

Aren't these facts rather significant—don't they mean anything to you?

Send for our new book, "The Final Truth About Speed Indicators."

Warner Instrument Co.
213 Wheeler Ave., Beloit, Wis.

OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

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Large Sales

make it possible for us to import **THE CELEBRATED BRAMPTON CHAINS** from **ENGLAND** (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped **"BRAMPTON."**

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller	$1.00 per foot.
1 x ⅝ x ⅝ roller	1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

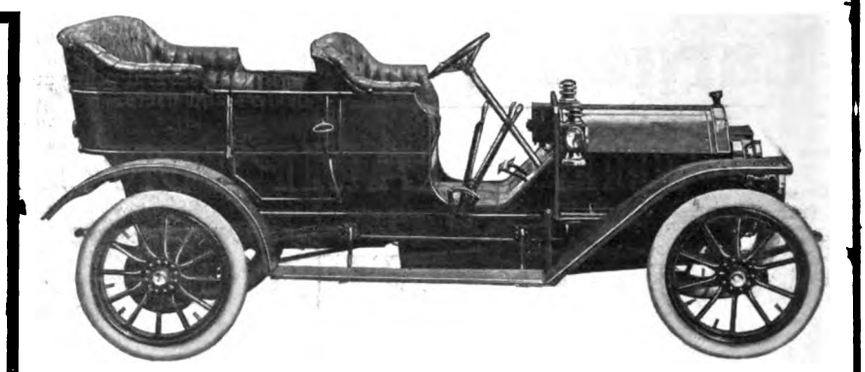
Branches: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo.
202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

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Reliability

WHAT DOES IT MEAN?

It means that which merits confidence.



There are two things which may be considered the limits of the motor car's future. One is economy and the other is proof that it can be depended upon.

The motor car's ability to cover practically indefinitely 100 miles a day for every day, is sufficient evidence of its reliability, which would be more than any reasonable requirements it would be asked to meet in ordinary use.

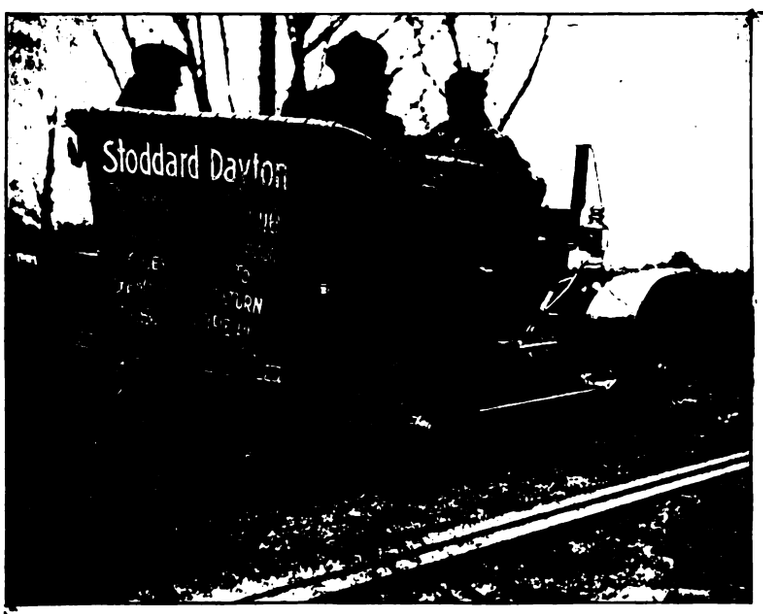
A regular Premier stock car started out on June 1st to cover at least 100 miles a day for 100 days—MORE THAN ONE-THIRD OF THE DISTANCE HAS BEEN COVERED WITHOUT EVEN ADJUSTING THE CARBURETER.

Premier performance is such as to merit the utmost confidence in the ability of the car and the further fact of its selection as the Official Pathfinder for laying out the 1908 Glidden Tour—a task probably more difficult of accomplishment than any heretofore required of a fully equipped stock touring car—is only an additional evidence of the trustworthiness inspired by this car.

Send for catalogs and Glidden Tour booklet.

PREMIER MOTOR MFG. CO., Indianapolis, Ind., U. S. A.

Standard Manufacturers A. M. C. M. A.



The Severest Tests

have demonstrated time and time again that the principles employed in

Timken Roller Bearings

are the only correct ones that insure perfect transmission of all power to traction use, eliminating both friction load and end thrust.

A Stoddard Dayton Stock Car equipped complete with **Timken Roller Bearings** finished April 12th, a ten-day century run, 1,000 miles over the roughest roads with all adjustments sealed, something impossible for a car equipped with the ordinary type of bearings to perform. This car, as do all cars of the **Stoddard Dayton** make, carries a full equipment of **Timken Roller Bearings,** as tests made under the most adverse and severe conditions have proven them an economical factor in the saving in wear and tear from strain alone.

And these are some of the reasons why more than **65 per cent.** of all the makers of high grade American Automobiles and over **90 per cent.** of the Commercial Truck builders are now using them.

Are you? If not, won't you let us give you some figures that prove. These are yours for the asking.

The Timken Roller Bearing Axle Company, Canton, Ohio

Branches: 10 East 31st Street, New York 429 Wabash Avenue, Chicago

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The automobile outlook for 1909

Every year since the inception of the automobile, public demand has drifted in certain directions and toward certain types of cars at certain prices. The tide has swelled from one extreme to the other; from the high priced car on the one hand to the "cheap" car on the other. There will continue still to be a limited demand for both. But the greatest popular demand will be for a good four cylinder car of ample size and power at about the price of the new



"Thirty"

the four cylinder 30 H. P. large car of CADILLAC quality at $1,400.00, in which we have something which cannot possibly have any successful competition because no other factory is organized and equipped to build a car of its quality at such a price.

The dealer who handles the product of the old established, permanent and reputable manufacturer, whose name on the car is an absolute guarantee of its quality, and whose car shows itself to be so far superior in every way to every other car in the popular demand class, will be the dealer who will get the business.

There is reason to believe that the sale of automobiles during the coming year will be far greater than ever before and the dealer who is not prepared to meet the public demand with the car the public wants at the price the public is willing to pay, is sure to see a heavy balance on the undesirable side of his profit and loss account.

In addition to the "Thirty," we shall continue the world-renowned small cars, which have a place of their own to fill in the automobile world, together with other models which have made the name CADILLAC famous the world over for that which is proven to be best in automobile construction.

We have already closed contracts and accepted orders with deposits for a large portion of our 1909 product. There still remains some territory open and there is also other territory now in the hands of old dealers in which we desire to make changes. If you are a "live" dealer and want the line of cars on which you can make the most money, as well as the line which will afford the greatest satisfaction to your customers and yourself, write us.

1909 will be a CADILLAC year

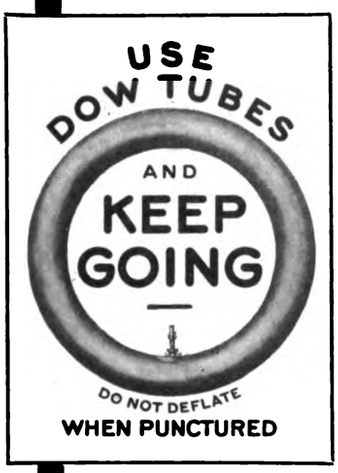
CADILLAC MOTOR CAR COMPANY, (Members A. L. A. M.) Detroit, Michigan

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DOW NON-DEFLATION TUBES

THE BEST TUBES EVER MANUFACTURED

Run Cooler. Are Resilient and Fast. Insure Ease of Mind and Ease of Pocket. Will fit the casings you are now using.



NEW PRICE LIST

FOR AMERICAN SIZE CASINGS ONLY

AMERICAN SIZES	PRICE
28 x 3	$14.00
30	15.00
32	16.00
34	17.00
36	18.00
28 x 3½	16.00
30	17.00
32	18.00
34	19.00
36	21.00
30 x 4	19.00
31	20.00
32	21.00
34	22.00
36	24.00
32 x 4½	22.00
34	24.00
36	26.00
32 x 5	26.00
36	28.00
34 x 5½	28.00
36	30.00

FOR METRIC SIZE CASINGS ONLY

METRIC SIZES	PRICE
860 x 85	$17.00
710 x 90	16.00
760	17.00
810	18.00
840	18.00
870	19.00
910	21.00
960	22.00
1010	24.00
765 x 105	19.00
815	21.00
875	22.00
915	24.00
820 x 120	22.00
850	23.00
880	24.00
920	26.00
1020	30.00
1080	32.00
895 x 135	26.00
935	28.00
1000 x 150	36.00

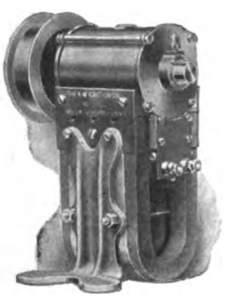
NOTE.—A discount of five per cent. will be allowed if cash accompanies order; otherwise, these prices are net. Send for catalog and reports of tests. Dealers—Send for new lists.

DOW TIRE COMPANY, 2000 Broadway, NEW YORK
194 Summer Street, BOSTON, MASS.

THE K-W MAGNETO

Model F

Has bracket as shown for attaching to frame of car. Made especially



For Ford Runabouts

Good on any car.

High in Quality—Low in Cost
Perfectly Reliable—Easy to Apply
More Power—Less Fuel

Price $35.00

It starts the engine easily without batteries and runs it faster and better than any battery because it gives a hotter spark. They run in ball bearings and have no moving wires or brushes to give trouble and wear out. They are made to **last** and **they do last.** They are the **cheapest** that is **good** and there is **nothing better** at any price.

We also make high grade Coils and Plugs and the K-W Master Vibrator. Get our catalogue.

THE K-W IGNITION COMPANY

38 Power Avenue, CLEVELAND, OHIO

REPRESENTATIVES:

A. H. GREEN & CO., 1686 Broadway, New York.
W. J. FORBES, 220 Congress St., Boston, Mass.

THE STEPNEY Spare Motor Wheel

ON AND GONE IN LESS THAN A MINUTE



Punctures and other tire troubles have no terrors for the motorist whose car is equipped with the **STEPNEY WHEEL.** If a tire goes wrong it is only the work of a moment to attach the **STEPNEY WHEEL** and be off again with no further delay.

Isn't it worth having, for the peace of mind alone that it brings?

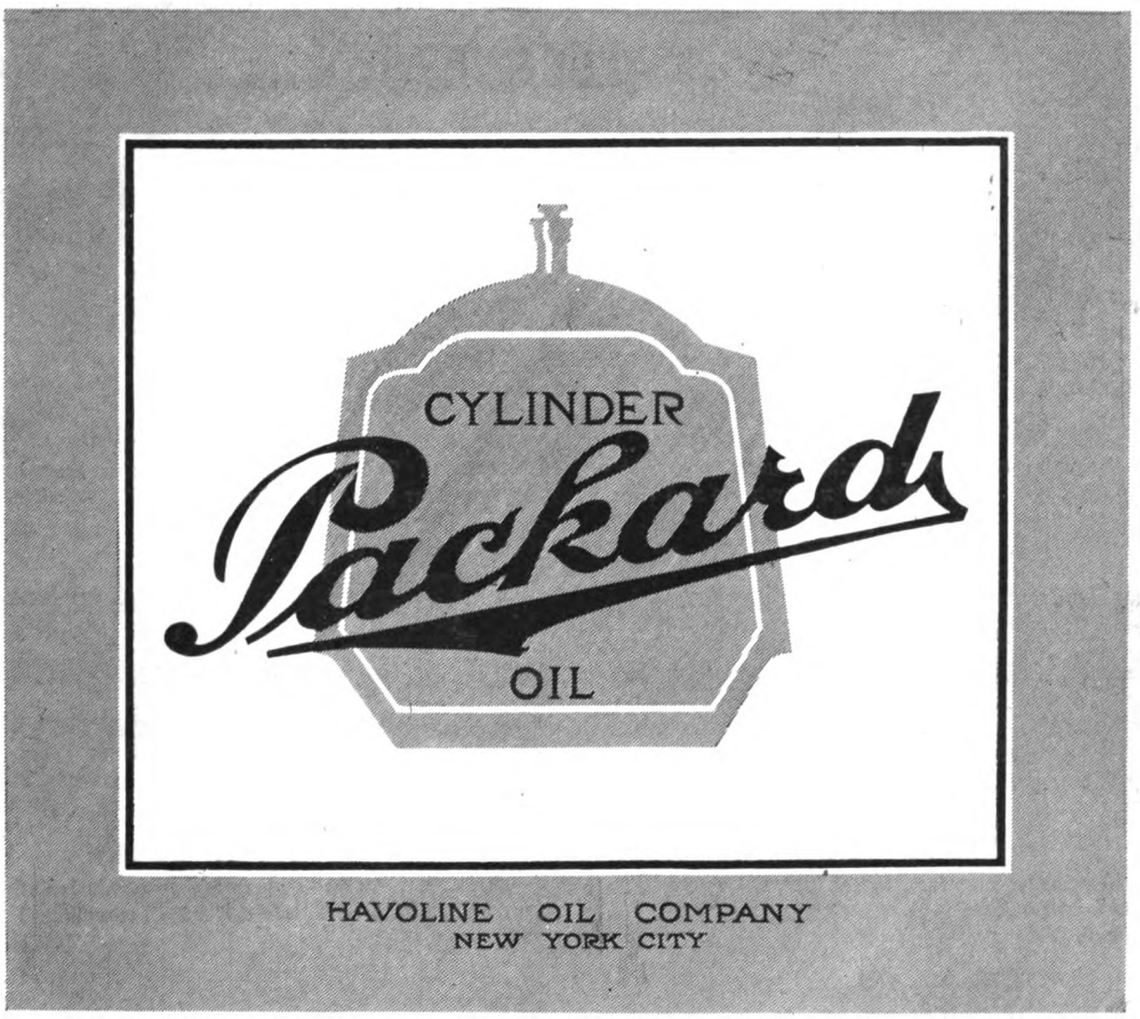
Write for Catalogue D.

Spare Motor Wheel of America, Ltd.

236 Michigan Avenue, CHICAGO, ILL.

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Special Announcement



THE ONLY GENUINE PACKARD OILS

¶The Lubricants bearing this label are the ones now used and officially endorsed by the Packard Motor Car Company. They may be obtained from all Packard dealers, or directly from us.

¶*They are the only Genuine Packard Oils.*

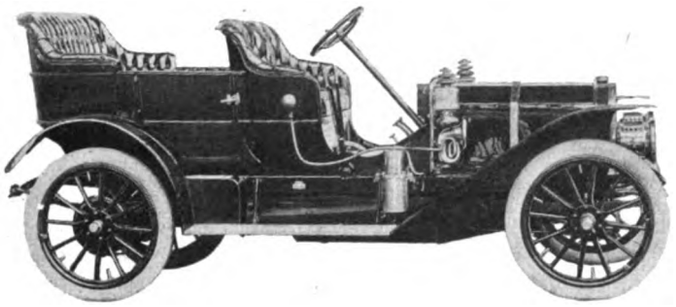
¶We make this announcement for the protection of the trade.

Havoline Oil Co. HAVOLINE MOTOR OILS **80 Broad Street NEW YORK CITY**

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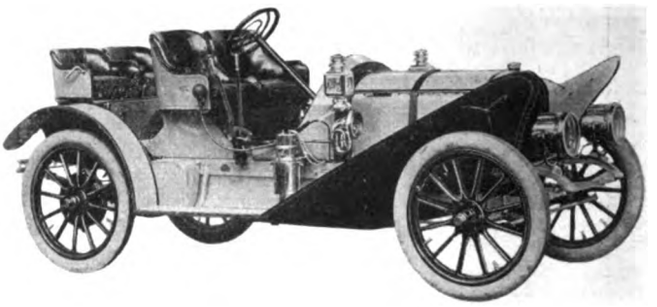
Rambler

1908 Models



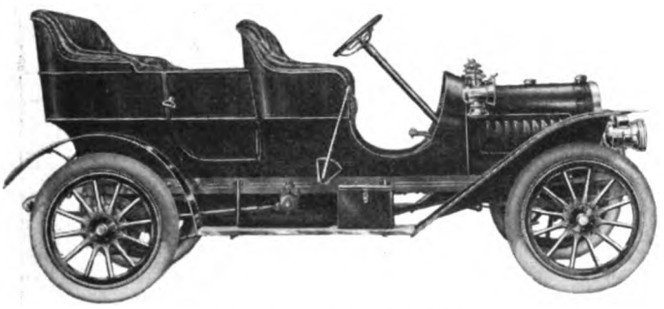
Model 34—$2,250

32 H. P. Selective type roller bearing transmission, floating type rear axle, 112" wheel base, 36" x 4" wheels and tires.



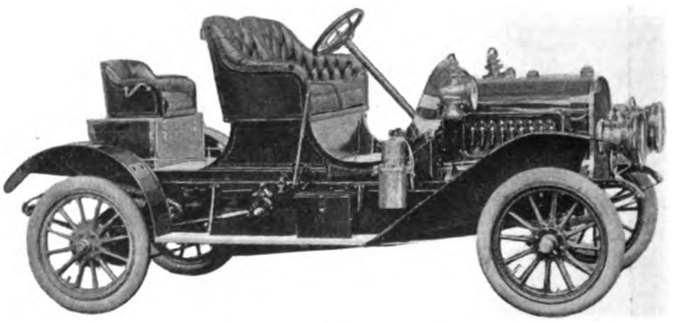
Model 34 A—$2,250

32 H. P. Selective type roller bearing transmission, floating type rear axle, 110" wheel base, 36" x 4" wheels and tires.



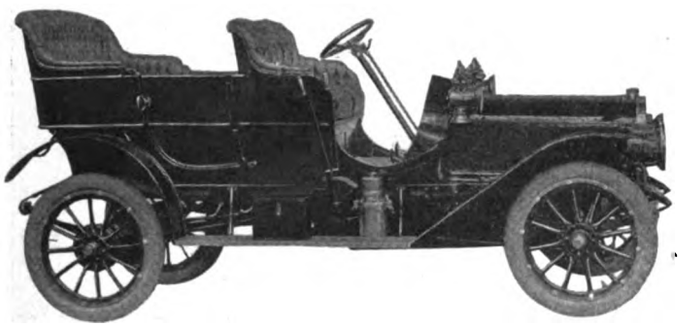
Model 31—$1,400

22 H. P. Enclosed planetary transmission, floating type rear axle—106" wheel base, 34" x 4" wheels and tires. Detachable tonneau. As runabout $1,300.



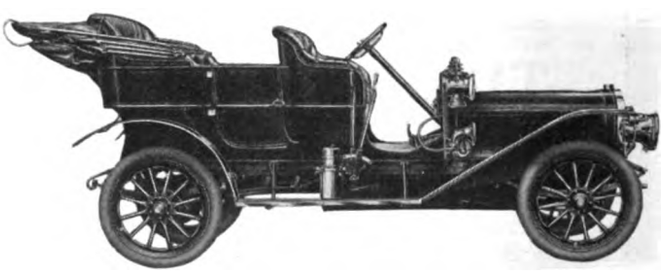
Model 37—$1,250

22 H. P. Enclosed planetary transmission, floating type rear axle, 102" wheel base, 30" x 3½" wheels and tires.



Model 248—$1,900

30 H. P. Sliding gear, roller bearing transmission, floating type rear axle, 108" wheel base, 34" x 4" wheels and tires. As Runabout $1,800.



Model 345—$2,500

40 H.P. Sliding gear roller bearing transmission, floating type rear axle, 112" wheel base, 34" x 4" wheels and tires.

Please write at once if you are interested in any of these Models.

THOMAS B. JEFFERY & COMPANY, Main Office and Factory, **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco
Representatives in all leading cities.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, July 9, 1908. No. 15

POPE RECEIVERS GET FREE REIN

May Continue Manufacturing for 1909—Would Sell Columbia Steel Stock—Apperson Rumor Denied.

In spite of the so-called banking or "note brokers" interests opposing any line of action other than a closing up of the Pope Mfg. Co. affairs to a point where they would get their money as quickly as possible, the receivers on July 7 obtained from Vice-Chancellor Howell, of the New Jersey chancery court, a general order permitting them to go ahead and carry on the business at the Hartford and Westfield plants for the season of 1909, and to buy the necessary material for and to manufacture 700 automobiles and 50,000 bicycles of the 1909 pattern.

This action is regarded as being agreeable to the wishes of the majority of merchandise creditors, who want to see the business regain its feet and are willing to allow a reasonable time to that end.

The demand for an immediate settlement of claims has been placated to a large extent by the issuance of an order looking to the payment of a second dividend of 25 per cent. on all allowed claims. The order directs the receivers to apply to the Superior Court of Connecticut for the transfer to the jurisdiction of the New Jersey court of sufficient funds to pay such a dividend to the creditors. The hearing on this application will take place in Hartford on July 21.

A proposition to sell $300,0000 worth, par value, of shares in the Columbia Steel Company, which were among the assets, to Howard Cole for $135,927.75 and a cancellation of the Pope indebtedness to the Columbia Co. amounting to $54,072.25, making in effect a total of $190,000, is being entertained by the receivers. The offer is subject to the approval of the court of chancery and the receivers have petitioned the court for direction as to its acceptance or rejection, the hearing to be held in Newark on July 14. The receivers declare it the most favorable offer made them for the property and incline to accept it. The hearing will permit whatever objections may be offered.

The attorneys for Louise Unzicker, who with others of her family, is the owner of the Western Wheel Works property in Chicago on which the Pope Co. has a 17 year lease at $25,000 a year, have been endeavoring to get an order compelling the receivers to pay into the court money to cover 25 per cent. of her claim each time a 25 per cent. dividend is paid the creditors. The money has been ordered set aside, but decision is reserved as to paying it into court.

Rumors that Apperson Bros. were negotiating for the Pope-Toledo plant, at Toledo, arose from the fact that R. D. Apperson, of Virginia, asked permission to examine it with a view to purchase. Receivers Scott and Yule granted this permission, but no definite offers have been made, and the Apperson in question has no connection with the Kokomo firm.

Stepney Sues on Spare Wheels.

"Spare wheels" are the subject of a suit brought in Portland, Maine, against the Burrowes Screen Co. by the Stepney Spare Wheel companies, who allege that the defendant is infringing their patent on the Stepney spare motor wheel. The plaintiffs claim basic patent rights on this form of accessory both in Great Britain, their native heath, and in the United States, where an American company with English capital is operating under license.

Closing Auto Vehicle Affairs.

The last rites over the bankrupt Detroit Auto Vehicle Co., of Detroit, Mich., have been set by the referee in bankruptcy as taking place on July 21, at which time the estate will be officially closed provided nothing untoward arises. All the creditors have been invited to attend a meeting in Detroit on that date, when the trustee's report and final account will be passed upon and the remaining funds divided.

ABSORBS AUTOMOBILE OFFSPRING

American Locomotive Drops Berliet—Parent Concern to Make "Americanized" Cars, Trucks and Cabs.

Changes involving the death of the American Locomotive Automobile Co. as a separate and subsidiary company of the American Locomotive Co., and the dropping of the name "Berliet" in connection with the product, have been announced by Vice-President Ball of the parent concern. The three-year contract with M. Berliet, of Lyons, France, under which the French Berliet was duplicated in the American Locomotive Co.'s factory at Providence, R. I., terminated on July 1, and has not been renewed, as a more distinctly American modification in the type of touring car is contemplated for the future together with a new line of trucks and cabs.

In announcing the changes, Vice-President Ball says: "The American Locomotive Company, having acquired all of the stock of the American Locomotive Automobile Company, has for corporation reasons absorbed that subsidiary company with several others which have heretofore led separate existences. The policy therefore is not one affecting the automobile company solely. The automobile business will be continued in the works at Providence, in the garage in New York, and in the agencies in various parts of the country on a larger scale than before. Besides continuing to make touring cars, the company has in prospect a business of considerable proportions in the production of trucks and cabs.

"The American Locomotive Co. made its original contract with M. Berliet for the purpose of purchasing experience. It has now acquired all that is to be learned of foreign design and construction, its organization is perfected and its productive plant skilled in turning out the finest work. While there will be no radical changes in the gen-

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eral design of the cars with the dropping of the name Berliet, it will now be possible to make certain modifications of the French design which are desirable for American uses. It never was intended that any trucks or cabs should be built under the Berliet license. These, with the touring car, will now have the benefit of the eclectic combination of foreign and domestic practices that are now in vogue at the Providence factory.

"The personnel of the automobile department remains unchanged, Mr. James Joyce continuing as manager of the department, with R. B. Van Dyke in charge of the New York offices, Charles E. Davis as superintendent of the factory at Providence, and B. D. Gray as chief engineer."

Smith Speedometer Shows Assets.

The affairs of the R. H. Smith Mfg. Co., of Springfield, Mass., which on June 25 assigned for the benefit of its creditors, following the death of R. Hale Smith, its president, have cleared sufficiently under the work of the trustees to develop an inventory of its assets and liabilities. The total liabilities amount approximately to $60,000, while the assets are estimated to have an inventory total of $70,391.02

The items constituting the assets are set forth by the trustees as follows: 2,300 motormeter instruments in various stages of completion and parts for 700 additional instruments, $19,954.07; rubber stamp supplies, $15,960.61; machinery, tools and fixtures, $14,476.34; accounts receivable, estimated value, $17,500; Springfield Realty Trust stock, 833 shares at par value, $2,500. Of these assets, $11,500, at inventory valuation, were pledged as collateral security for bank loans, prior to January 1, 1908. None of the merchandise creditors was protected by security. The trustees, Robert A. Knight and Charles H. Beckwith, have discontinued the New York and Chicago branches for the sale of speed indicators, and the instruments now on hand will be disposed of in the regular course of business unless this department can be disposed of advantageously as an entirety. Before taking up the manufacture of speed indicators the company had long been engaged in making rubber stamps, and this branch, according to the trustees can be continued at a profit. The trustees therefore recommend that they be permitted to carry on the rubber stamp department as a means of conserving the best interests of the creditors.

Alexander Takes a Partner.

Associated with W. D. Alexander in his new jobbing enterprise in Atlanta, Ga., is George M. Seewald, for five years manager of the Atlanta branch of Morgan & Wright, covering five southern states. The new concern will be known as the Alexander-Seewald Company. Among other lines it has obtained the southern agency for Morgan & Wright tires.

The Week's Incorporations.

Dallas, Tex,—Dallas Motor Car and Transit Co., under Texas laws, with $6,000 capital. Corporators—J. A. Bergfield J. C. Hooper, J. E. Power.

St. Louis, Mo.—Eureka Motor Buggy Mfg. Co., under Missouri laws, with $50,000 capital. Corporators—John Woodburn, B. A. Wicks, Charles Zimmerman.

San Diego, Cal.—Tibbals Auto Supply Co., under California laws, with $10,000 capital. Corporators—W. L. Tibbals, San Diego, Cal.; L. H. McGowan, A. J. Scherer, Los Angeles, Cal.

Garwood, N. J.—Hicks Motor and Mfg. Co., under New Jersey laws, with $25,000 capital; manufacturing dynamos, motors, etc. Corporators—A. B. Grafy, H. E. Hicks, W. B. Elliott.

New York City, N. Y.—Fisk Rubber Co. of New York, under New York laws, with $5,000 capital. Corporators—William G. Philippean, Max Meyer, 2 Rector street, New York City, N. Y.; Alfred N. Mayo, Springfield, Mass.

New York City, N. Y.—Murray Hill Garage Co., under New York laws with $25,000 capital; manufacturing, dealing in and renting cars, carriages, wagons, boats, etc. Corporators—W. A. Mayon, S. C. Conger, J. S.Keith, New York City.

Wheeling, W. Va.—Triumph Automobile Tire Co., The, under West Virginia laws, with $1,000,000 capital. Corporators—Henry E. Keys, Charles O'Deer, W. E. Johnson, Homestead, Pa.; C. K. O'Hara, Akron, O.; K. P. Stewart, Wheeling, W. Va.

In the Retail World.

W. H. Tibbals, of San Diego, Cal., with L. H. McGowan and A. J. Scherer, of Los Angeles, has incorporated the Tibbals Auto Supply Co., to open a new supply house in San Diego.

William A. Blair has retired from the firm of H. A. Rowan, Jr., Co., owners of the Aldine Garage, 2028 Sansom street, Philadelphia. H. A. Rowan, Jr., the other member of the firm will continue the business.

The Ellis Motor Car Co., Newark, N. J., will move September 1st to a new building, 124-126 Washington street. Its present location at 222 Halsey street has been outgrown. The company handles the Pierce Arrow and Knox cars. W. H. Ellis is proprietor of the concern.

C. B. Peironnet and W. J. Dannatt, constituting the Clinton Automobile and Supply Co., of Clinton, Iowa, have taken over the business, garage and equipment of the Lamb Automobile Co. of that city. Val Bonney, manager of the business under the old name, will devote several months to rest and recreation.

Franklin After Southern Trade.

As "southern traveling representative" of the H. H. Franklin Mfg. Co., L. E. Hoffman has found the job all that the name implies, having just completed a 17,000 mile automobile business trip through the southern states after returning from a long trip in Central America and Mexico. Altogether he has been gone six months, placing agencies in southern cities and in Mexico City, Monterey, Torreone, Guadalajara, Aguas Calientes, Vera Cruz, Madeira, Yucatan, and Havana. Business conditions in the majority of the cities visited indicate a healthy and growing market for cars in districts where they have heretofore been regarded as impossible luxuries.

Morgan & Wright Make Unusual Sizes.

Tires of larger sizes through the small diameter than are ordinarily obtainable for certain size wheels are announced as among the new and unusual productions of Morgan & Wright, of Detroit, Mich. Of these a 31x4-inch Universal Dunlop tire is conspicuous since it is designed to fit perfectly a 30x3½-inch, 1908 Midgley rim. Similarly the new 33x4-inch Dunlop will fit a 32x3½-inch Midgley rim. These special sizes are recommended for use on rear wheels. The 40x4 inch regular clincher tire which is announced, has the distinction, according to its makers, of being the largest size pneumatic tire made in this country.

Ford Factory Plans Finished.

Final details of the immense new factory of the Ford Motor Co., on the old Highland Park race track property at Detroit, have been announced. The main building, which will be of reinforced concrete, steel and glass, will be 865 feet long, 75 feet wide, four stories high, and will have six acres of floor space, and in addition there will be a separate office building, a power plant and a group of saw-tooth roof outer buildings. Adequate light will be a feature of the main building, the glass in the windows totaling 52,453 square feet. The architect is Alfred Kahn, who designed the Pierce, Packard, Garford and Thomas plants.

Continental Promotes Competition.

Tire changing contests, to demonstrate the speed and facility with which its demountable rims and ready-flated tires may be handled, are being held at the various agencies of the Continental Caoutchouc Co. The first of these contests took place in Hartford, Conn., recently, at which the winner, Harold Green, did the trick in 58 seconds. This was followed by a contest in New York, at the Continental headquarters on Broadway, where the first prize was won by R. Piccoli, in 59 seconds. The third contest takes place in Boston in the near future.

Downing Goes to Studebaker.

W. S. Downing has resigned his position as sales manager of the Pope Motor Car Co., at Indianapolis, Ind., to become the Pacific Coast manager for the Studebaker Automobile Co., of South Bend, Ind. He will have his headquarters at San Francisco.

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MAY MAKES AN EXPORT DECLINE

Number of Cars Shipped Abroad Less than a Year Ago—Parts Exportations Increase—The Summary.

An increase of something over $22,100 in the valuation of automobile components exported from the United States during the month of May last, served to curtail in part the loss due to decreased shipments of cars. This decrease was from 281 in May, 1907, to 229 in the corresponding month of this year. In values, the combined total of cars and parts were, respectively, $665,450 and $459,057, last year and this.

Gains in six of the divisions recognized by the Department of Commerce and Labor at Washington, also had a steadying effect. The principal source of this movement was France, which gained approximately $1,500, while South America, "Other Europe" and Germany, also contributed in amounts ranging through four figures. As for the countries revealing depreciating markets, the United Kingdom led, with no less than $103,088 decline. British North America, Italy, and Mexico, follow in this order, with $56,000, $31,000, and $30,000, respectively and in round numbers.

For the eleven months ending with May, 2,206 cars were exported, as against 2,567 cars during the corresponding period of 1907. The valuation of parts for this period shows the usual reversal, the increase being from $548,871 in 1907 to $588,401. The totals, including the parts valuations, however, reveal a loss of $203,062. The field is evenly divided in the matter of gains and losses for the period in question. Of the improving markets, that of the United Kingdom is the most noteworthy, with a gain of $283,834, France with $143,258, and West Indies and Bermuda with $42,360, following. Mexico proves to be the greatest loser, with a $383,500 drop, while British North Americt, and "Other Europe follow in this order. The record in detail follows:

	May 1907	May 1908	Eleven Months Ending May 1906	Eleven Months Ending May 1907	Eleven Months Ending May 1908
Automobiles and parts of:—					
*Automobiles	$618,018	$389,487	$2,957,748	$4,221,316	$4,008,724
Parts of	47,432	69,570		548,871	558,401
Exported to—					
United Kingdom	235,751	132,663	754,286	1,219,672	1,503,506
France	85,984	100,597	225,822	444,632	587,890
Germany	16,580	21,785	79,625	119,136	126,279
Italy	37,500	6,300	245,358	243,019	237,596
Other Europe	10,879	16,381	158,630	227,797	132,998
British North America	150,079	94,066	556,009	1,020,411	809,836
Mexico	69,998	39,908	341,692	762,650	379,126
West Indies and Bermuda	15,453	6,887	237,264	199,005	241,365
South America	14,300	21,534	77,275	184,570	213,733
British East Indies	840	1,611	34,697	33,926	28,558
British Australasia	13,287	5,938	155,591	202,741	153,750
Other Asia and Oceania	14,585	10,598	49,732	91,561	123,249
Africa	140	127	28,404	8,813	7,388
Other countries	74	662	13,363	12,254	21,851
Total automobiles and parts of..	$665,450	$459,057	$2,957,748	$4,770,187	$4,567,125

* Number not stated prior to July 1, 1906.

Imports Falling Off Rapidly.

During the month of May the total imports of foreign cars by the United States fell away nearly to the amount of $200,000. The exact figures for the month in 1907 and 1908, respectively, were 105 cars, value $333,657; and 72 cars, value $170,185. Component parts were imported to the value of $75,768 in 1907, and $42,515 this year. France and Italy were the countries most seriously affected. France, in May 1907, exported to the United States 76 cars, value $242,020. This year but 52 cars, value $122,952 were sent here; a decrease of nearly 50 per cent. Italy, in May, 1907, sent 16 cars, valued at $48,427, and in May, 1908, 15 cars, valued at $34,939. For the 11 months ending with May, the total figures are respectively, 1,113 cars, value $3,839,045, and 974 cars, value $2,346,613.

Hartford Rubber Running Nights.

Chafing under a delay of two days, made necessary by the taking of inventory last week, the Hartford Rubber Works Co. has taken steps to quickly regain lost working time, as night shifts were resumed on Monday and will be continued indefinitely, or until the catching up on orders is in sight.

Particularly gratifying to the company is the reception accorded the Hartford clincher tire, the sales of which have doubled and half doubled again this year.

Selden Parts with Palmer & Singer.

The Selden Motor Vehicle Co., of Rochester, N. Y., has discontinued its New York agency with the Palmer & Singer Manufacturing Co., and for the present the agency wil rest with E. T. Birdsall, the company's engineer. The latter has headquarters at 41 West Sixty-third street.

Overland Enlarging for Next Year.

The Overland Automobile Co., of Indianapolis, Ind., is at work on a large addition to its factory in preparation for the 1909 season. Manager John Willys is buying materials for a greatly increased production.

TIRES NOT MOTOR CAR PARTS

Entitled to a Lower Import Duty Even When Shipped with Machines—Importers Win in Court.

The long fought question as to whether tires imported with new machines are dutiable as rubber goods at 30 per cent., or as parts of an automobile and therefore subject to the 45 per cent. duty as being made principally of metal, upon being taken to the United States circuit court for the Southern district of New York, has been decided in favor of the automobile importers and adversely to the government.

The Auto Import Co., Archer & Co., and Massenat Deroche were the complainants against the action of the collector of customs at the port of New York in assessing duty on the tires that came with their imported motor cars at the rate which obtains for automobiles themselves, instead of at the lower duty. On the first appeal from the decision of the collector, the importers lost and the Board of United States General Appraisers upheld the collector's action, but the case was carried up with a different result, although the government has now in turn given notice of appeal to the circuit court of appeals.

The brief of the decision explains that "Automobiles were imported with tires accompanying them; but the tires had not, prior to importation been attached in such a way as to be capable of immediate use, and they were interchangeable and might or might not be used on the machines with which they were imported. The court held that the tires and the machines did not together constitute an entirety, but were dutiable as though imported independently.

"In order that merchandise that is distinctly a manufacture of one material, as a rubber automobile tire, shall be classified as a manufacture of another material, as an automobile in chief value of metal, it is necessary that the entire article manufactured should have existed as an assembled entity, so that it would be an invasion for the foreign maker to break the entity into fragments and expect each fragment to be treated as if complete in itself. But where an article has never been assembled abroad, it ought not for tariff purposes to be treated as if it had been so assembled."

District Judge Platt, in giving the decision, said in part: "In the cases at bar there is no evidence that the rubber tires in issue had been attached to the wheels of the automobiles in the country of production in such a way as to be capable of immediate use. It is to be observed that the tires are not so markedly a part of the automobile as the nuts, bolts, beams, angle iron, etc., because these latter things are individual to the particular make of machine and are intended to stay until worn out."

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WHITE WINS

A Partial Summary of Victories, May, 1907-May, 1908

Perfect Score in Harrisburg Endurance Run

Tieing with three other cars in the contest of May 5th-6th, 1907. For the result of the "run-off," see below.

Fastest Time in Wilkes-Barre Hill-Climb

Defeating 45 high-powered gasolene cars, in the great contest on Decoration Day, 1907.

Fastest Time in Cleveland Hill-Climb

Defeating 40 high-powered gasoline cars.

Fastest Time in California Hill-Climb

Defeating the fastest of its gasoline competitors by nearly two minutes on the 2⅞ mile hill at Witter.

Perfect Scores in Sealed Bonnet Contest

Both White cars entered made perfect scores in this contest conducted by the Automobile Club of America.

Officially Observed Non-stop Run of 1871 Miles

Held under the auspices of the Royal Automobile Club of England and certified by that organization.

Fastest Time of the Season on the Track

One mile in 1:02, ten miles in 12:54, and twenty-five miles in 29:07 at the Santa Rosa Track Meet.

Officially Declared Most Efficient Car

In the South Harting hill-climb, conducted by the Royal Automobile Club, the White won the contest because it developed at the rear wheels a greater percentage of its assigned horsepower than did any other car. The rating assigned to the White was 50 horsepower.

Wins English Dust Trials

Proving officially that it raises less dust than any other car.

Clean Sweep in the Glidden Tour

Three White entries make three perfect scores.

Won Hower Trophy

The single White runabout entered in the Glidden Tour defeated a dozen high-priced gasoline runabouts competing for this prize.

Won California Reliability Contest

In the original contest held September 20th, two Whites tied with two gasoline cars. In the "run-off" held November 15th and 16th, both Whites made perfect scores, while both gasoline cars were penalized.

Won Quaker City Endurance Run

In this contest, held January 1st, 2d and 5th, the White vanquished 27 gasoline cars of 23 leading makes, winning the MacDonald & Campbell trophy.

Fastest Time in San Francisco Hill-Climb

Winning the free-for-all, the $2,500 class and the $3,500 class.

Fastest Time in the New York Carnival Hill-Climb

Making the ascent of Fort George hill in 32⅕ seconds, compared with the best gasoline time of 36 seconds; largest entry list of any hill-climb ever held.

New San Francisco-Los Angeles Record

The White car made the 478-mile mountainous journey in 17 hours and 17 minutes, cutting 56 minutes from the previous figures.

Double Victory in Harrisburg Endurance Run

The single White entry was the only touring car to make a perfect score, winning the principal 1908 trophy, the Board of Trade Cup, and also the 1907 prize in a "run-off" with last year's other perfect-score drivers.

Perfect Score in Endurance Runs at Boston, Detroit, Baltimore, Kansas City, Indianapolis and Atlanta

WRITE FOR LITERATURE

THE WHITE COMPANY, Cleveland, Ohio

NEW YORK CITY, Broadway at 62d St.
SAN FRANCISCO, 1460 Market St.
PHILADELPHIA, 629-33 N. Broad St.
BOSTON, 320 Newbury St.
CHICAGO, 240 Michigan Ave.
PITTSBURG, 138-148 Beatty St.
CLEVELAND, 407 Rockwell Ave.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JULY 9, 1908.

Strength of the Good Roads Movement.

What evidence was lacking to the popular mind hitherto of the strength which the good roads movement has attained is now afforded by the magnitude of the convention which was held in Buffalo, N. Y., this week. The cause of good roads has progressed practically without cessation since it obtained its first impetus at the hands of the bicycle industry some years ago. With the growth of the automobile movement the demand for improved highway conditions, which had been permitted to lapse to a certain extent, has been renewed with tremendous vigor. The contention which sometimes is made, that automobiles tend to injure the highways is a circumstantial and somewhat fortunate incident to the case, for, partly in self defense and largely because of the advantages to be obtained by the motorists, the automobile interests have been largely responsible for the present good roads agitation from which great benefits to all users of the highways are to result.

That two thousand or more delegates from all parts of the country are taking an active part in the present assemblage, that they are composed, not alone of the motorists but also of representatives of the American Road Makers' Association and the National Grange, is of tremendous advertising value to the cause. What the convention accomplishes in a definite and technical way may be considered from the present standpoint as hardly more important than this feature. The public arousal which may be brought by focussing general attention upon any subject is certain to carry in its wake results of the practical sort, such as the engineers and other experts at the Buffalo meeting are paving the way to accomplish. What this meeting may do for the United States and for America, the International Congress, to be held in Paris next October, on an even more ambitious scale, will do for the world at large.

The good roads movement is one of the biggest and most pregnant movements of which it is possible to conceive. Its problems change rapidly with the years and require a constant change of method to cope with them. In order to face these new conditions properly representatives of not one or two, but all interests which touch the highway in any sense, must be allied and to that alliance must be added that popular support which is merited by and accorded only to questions of truly world-wide import.

The Readjustment of Automobile Values.

Considerable stir is being created over the announcements by a number of the better known makers, of new models of the medium-powered, medium-priced order, and the various rumors that others are about to follow their lead. From this it is urged that the days of the high-priced car market are numbered and that the era of the low-priced car—that fetich of the man who cannot afford a car at any price, as well as of the man of moderate means and tastes—is about to arrive. As a matter of fact, neither of these assumptions is strictly true, though it may be a fact that the demand for machines of the super-elegant order, is being tempered somewhat by the limited return which they bring on their purchase price, and though it is unquestionable that in terms of mileage value per dollar, the cost of cars is being reduced.

As a matter of fact the man who is waiting for the day of the low priced car is likely to wait for some time to come, and probably is doomed to partial disappointment in the end. It is possible to build cars to sell at very low prices. When their cost of operation is considered, however, they are not as cheap as might appear from a casual perusal of the maker's catalogue. The few exceptions to the rule, are the product of wholesale manufacture and are likely to remain exceptions for some time to come.

The true inwardness of the movement for cars of moderate power and price is that the public has begun to demand a car of sterling qualities first and always, and has learned to discriminate in making its choice. Furthermore, it is fast coming to demand a car which will satisfy a moderate demand for speed and carrying capacity and develop high qualities of endurance and reliability. Finding that such a car can be made and sold under proper conditions for what has come to be recognized as a moderate price, the call for this type of machine is rapidly increasing. The fact that in price as in other respects, it suits the tastes of a much larger group of buyers than the more pretentious machine, accounts for the growth of the demand, and reinforces the logic of the makers who are supporting it.

It has been demonstrated beyond all manner of doubt that in the construction of two cars of, say, 40 and 30 horsepower, respectively, it is impossible to save more than 10 per cent. over the cost of the larger in building the smaller—provided only that quality of material is retained, and the design kept practically uniform. The same number of parts are present in the two, the same processes of manufacture must be carried out. Practically the only structural difference is in the amounts of metal entering into them, and this difference is relatively small. Hence the relation between the costs of different powered models made by the same manufacturer and uniform in construction, is readily explained, and in many instances responds very closely to this law—if such it may be termed.

That the "poor man's car" ever will become a reality in the bargain counter sense, is never more unlikely than to-day. That cheap cars are available at present and at various prices, and that they will continue to be so, is beyond question. The production of the strictly high grade car at what are now regarded as low prices, however,

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is highly problematical at present, except in rare cases where huge outputs and close figuring triumph. The fact of the matter is that a readjustment of values is in progress, and that in that readjustment, a certain standard type of high grade product at a reasonable price, all things considered, is being evolved. Subsequently, it is likely that the development of the lower priced car at a proportionate cost will be given greater prominence. But this must be done according to a rational system, and more or less in accordance with the "law" above cited.

What England's New Patent Law Means.

Although it has been permitted to pass with but cursory notice in this country, the new provision of the British Patents and Designs Act of 1907, which is to go into effect on the 28th of next month, is destined to have a broad and searching effect on the imports of the United Kingdom—an effect which must be felt in no small measure in this country as in others, and one which will spare no industry nor combination of industries. Its stipulation that any British patent may be declared void if the article which is protects is manufactured "exclusively or mainly" abroad, means, in a word, that exporters of patented articles who have relied upon the British market hitherto, must either dispose of their manufacturing rights to local producers, or themselves establish local factories.

Just how this will affect the automobile industry in the United States, is open to conjecture. Of the total of nearly $460,000 worth of exports for the month of May last, $132,663, or 29 per cent. went into Great Britain, while the totals for the 11 months ending with May, show that very nearly one-third of our foreign business during that period was done in England. Furthermore, it is well known that many of the better established makers here, have strengthened their position by taking out foreign patents on certain exclusive features of their product, and that although these grants by no means cover the entire machine, they are of considerable value in protecting certain characteristic features.

In the fullest interpretation of the act, then, it will mean that the manufacturer whose car is equipped with, say, an original carburetter which it is desired to continue to protect in England, must either lease the manufacturing right abroad, or contrive to have his agents assemble all but the most salient features from imported parts, which means practically, British manufacture under American license. To the maker who has a sufficiently large amount of business there already, the obvious course of establishing local assembling factories is open. The small maker, and the maker doing a limited English business, however, are likely to suffer.

In the accessory field, the effect is likely to be less marked, though the burden will be none the less felt by a few makers and jobbers who handle a considerable amount of trade in that quarter. In that case it means a practical elimination of exportation to England, or else the abandonment of patent protection.

The bulk of the burden will fall upon Germany, it appears. According to a statement attributed to Sir Alfred Jones, no less than 25,000,000 pounds sterling of foreign, principally German, capital have been invested in England already as a result of the law. Several German manufacturing and exporting firms have been forced to augment their own resources very extensively, while owing to the loss of exports, the German business has fallen off correspondingly. The German Union of Industrialists even went to the length of attempting to secure an extension of one year on the time limit set for the law to go into effect, but without success. As the manufacturing costs average much higher in England than in Germany, the conduct of the new British subsidiary factories must be more expensive than manufacturing under the old conditions has been, so that counting the cost of the new establishments, the income from German capital is likely to be greatly curtailed in the near future so far as this one field is concerned. Consequently the situation is regarded as being exceedingly grave.

Eclipse of the "One-Man" Idea.

Individual brilliancy, while perhaps being rewarded more liberally in a financial way than ever before, is no longer being "played up" so heavily as in the past, as the basis for the reputation of automobile manufacturing concerns. The "one-man" idea is being eclipsed by that mysterious thing known as "organization," and the manufacturing companies, instead of being mere hastily formed groups of men and capital to exploit and advance the respective mechanical and business conceptions of bolder pioneers, have become more institutional in character, with conservative tendencies and certain well defined lines of policy.

COMING EVENTS

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 14, Spokane, Wash.—Spokane Automobile Club's hill climbing contest.

July 15, St. Paul, Minn.—Automobile Club of St. Paul's meet at Hamline track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

In many respects this is of decided benefit both to the public and the trade, sparing them the sudden and ill-considered surprises which are almost invariably incident to complete "one-man" power. The conservatism which makes more deliberate the movements and actions of large organizations is by no means the same thing as the "dry rot" which occasionally afflicts large corporations to the advantage of their more active individual rivals, but is a healthful governor on progressive ideas and enthusiasms. When an established concern of reputation announces either a new car or a new selling policy, it is not likely to be the result of a noon-hour inspiration or impulse of the day before, but the product of the combined thought and experience of many able minds. If it relates to business policy it has been decided upon only after much conference with the interests it would be likely to affect and after consideration from every possible side, while in the case of a mechanical production, it is only offered to agents and the public after long tests and an absolute ascertainment of its value.

That every concern must needs avail itself of the best talent which it can gather to its aid is of course a truth forced upon it by competition. But for its most perfect efficiency there must ever be the strong spirit of organization and settled policy rather than dependence upon individual performance.

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FIFTY-FIVE CARS IN GLIDDEN TOUR

Composition of Teams that Start from Buffalo To-day—List of Contestants for the Hower Trophy.

Fifty-five cars set out from Buffalo to-day for a 1,700 mile journey through seven States, which will consume fifteen days. The accompanying map shows the route. Thirty of the cars are contestants for the Glidden trophy, in ten teams of three cars each, while 14 runabouts are in rivalry for the Hower trophy. Eleven official and non-competing cars accompany the contestants. The tour is the fifth annual touring contest for the Glidden trophy and the second annual for the Hower trophy. Although the tour idea originated in 1905 when Charles J. Glidden put up a perpetual trophy, this is the first year that the affair has been frankly labeled a "contest," and trade rivalry is on this occasion very keen.

For the Glidden trophy, stock touring cars carrying at least four passengers, of at least 125 pounds weight each, or the equivalent in ballast, enter in teams of not less than three cars each, under the name of a club affiliated with the A. A. A. Any club may have more than one team. All replacements, repairs and adjustments must be made during the running time of the car. All replacements must be made with parts inventoried and carried at the start of the tour, except tires. Tire repairs alone are not charged against the running time of a car. Only the operator and the one mechanician may work on repairs. Each competitor furnishes an observer who serves on a different rival each day. The trophy goes to the club having the team with the most points left after all penalty deductions. For the Hower trophy, runabouts are the contestants. The trophy goes to the individual car having the most points left after all penalty deductions.

Since every Glidden team happens to be composed of three cars, the penalties will be one-third of a point per minute or fraction thereof that a car is either ahead or behind time at controls, in excess of the two minutes leeway allowed for variation in timepieces, and one-third of a point per dollar or fraction thereof of value of replaced parts inventoried and carried from the start and calculated at the manufacturers' list prices. Each team is credited with 1,000 points at the start, from which the penalties against each of its cars are deducted. Every Hower contestant is credited individually with 1,000 points, from which one whole point is deducted, where Glidden team cars would incur the one-third point.

The composition of the teams competing for the Glidden trophy, with the individual contestants' numbers, which are given preceding each contestant's name, respectively, is as follows:

Team No. 1, Automobile Club of Buffalo—1, Charles Clifton, Pierce Great Arrow; 2, Charles Clifton, Great Arrow; 3, J. W. Maguire, Great Arrow.

Team No. 2, Columbus Automobile Club—5, E. H. Parkhurst, Peerless; 6, E. H. Parkhurst, Peerless; 7, E. H. Parkhurst, Peerless.

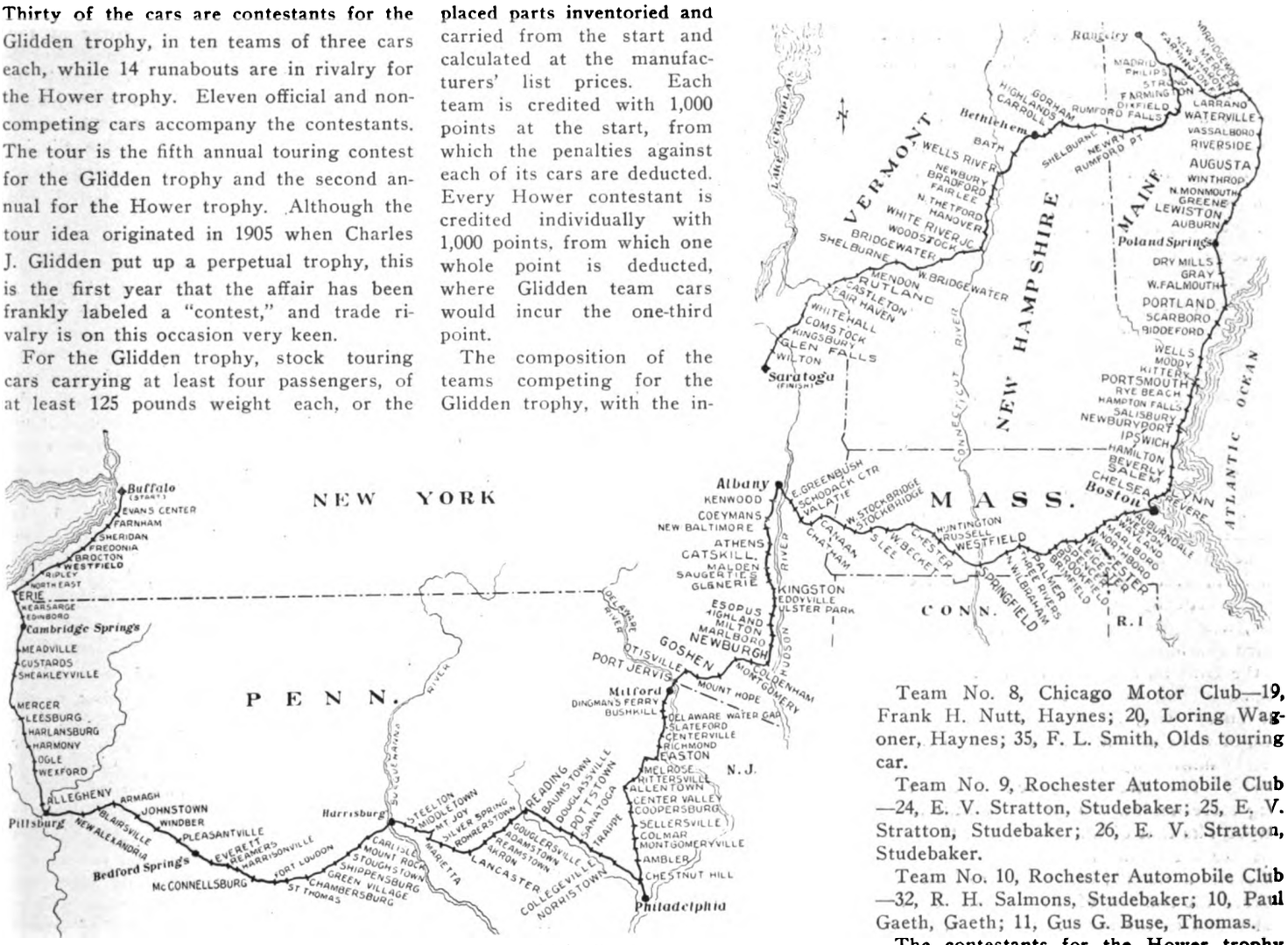
Team No. 3, Automobile Club of Syracuse—12, H. H. Franklin, Franklin; 13, John Wilkinson, Franklin; 14, G. H. Stillwell, Franklin.

Team No. 4, Bay State Automobile Club—21, Frank E. Wing, Marmon; 22, W. C. Marmon, Marmon; 23, W. C. Marmon, Marmon.

Team No. 5, Chicago Motor Club—15, Andrew Cuneo, Rainier; 27, J. B. Eccleston, Oakland; 28, E. M. Murphy, Oakland.

Team No. 6, Cleveland Automobile Club—29, A. R. Davis, Garford; 30, A. R. Davis, Garford; 31, A. R. Davis, Garford.

Team No. 7, Automobile Club of Buffalo—4, R. M. Owen, Reo; 8, R. M. Owen, Premier; 9, H. O. Smith, Premier.



MAP SHOWING ROUTE OF THE GLIDDEN TOUR

Team No. 8, Chicago Motor Club—19, Frank H. Nutt, Haynes; 20, Loring Wagoner, Haynes; 35, F. L. Smith, Olds touring car.

Team No. 9, Rochester Automobile Club—24, E. V. Stratton, Studebaker; 25, E. V. Stratton, Studebaker; 26, E. V. Stratton, Studebaker.

Team No. 10, Rochester Automobile Club—32, R. H. Salmons, Studebaker; 10, Paul Gaeth, Gaeth; 11, Gus G. Buse, Thomas.

The contestants for the Hower trophy are: No. 100, R. D. Garden, Pierce Great Arrow; No. 101, R. M. Owen, Reo; No. 102, W. H. Vandervoort, Moline; No. 103, Charles Clifton, Great Arrow; No. 104, George A. Weideley, Premier; No. 105, John Breyfogle, Gearless; No. 106, F. A. Barton, Franklin; No. 107, G. P. Moore, Stoddard-Dayton; No. 108, E. W. Shirley, Overland; No. 109, H. C. Tillotson, Stoddard-Dayton; No. 110, J. N. Willys, Overland; No. 111, J. N. Willys, Overland; No. 112, R. G. Cox, Stoddard-Dayton; No. 113, A. L. Kull, Gyroscope.

Official cars—95, R. M. Owen, Reo, official; 97, R. M. Owen, Reo, pilot; 98, R. M. Owen, Reo, pilot; 99, Charles Clifton, Great Arrow, chairman's car; 96, Packard, red cross car.

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ONE-TWO-THREE FOR GERMANY

Teutons Capture the Honors in the Grand Prix—Double Tragedy in Last Round of the Contest.

For the first time since 1903, Germany triumphed in the conquest of a great international road race, when Lautenschlager, driving a Mercedes, won the Grand Prix, after covering 478.3 miles of the course in 6 hours 55 minutes and 43⅘ seconds, or at an average rate of 69 miles an hour. As if this spectacular victory of one man and one car were not sufficient in itself, the triumph was reinforced by the winning of second and third place by Hemery, he of Vanderbilt Cup, and later of Ormond fame, and Henriot, both driving Benz cars, while of the seven leading cars at the finish, five were German.

America's sole representative, Strang, in the Thomas car, was hopelessly beaten from the start. It was said at the time, that an accident prior to the race had disabled the transmission in such a way as to eliminate the reverse and two of the forward gears. In the face of this handicap, he had the courage to start, and succeeded in completing the first round in 53 minutes 44 seconds. More difficulties developed later, however, and he was forced to withdraw.

The race, which was held last Tuesday, 7th inst., over the Dieppe circuit, and covered practically the same ground as last year, was by all odds the most spectacular which has been seen since the inauguration of the Grand Prix. For the first time, the engine dimensions were limited, the cylinder bores being restricted to 155 millimeters, or 6 inches and a trifle over, so that a certain uniformity of power output was required. The stroke required in the winning Mercedes was 6.6 inches, and the rated output, like that of the majority of the cars, was 120 horsepower.

Several accidents, involving two fatalities, marred the running of the contest. On the last round of the race, the Panhard, driven by Cissac, was overturned at a sharp corner, owing to the ripping off of one of the tires. Both Cissac and Schaub, his mechanic, were pinned beneath the machine, and were killed almost immediately. Harrison, driver of the British, Weigel, car, also was badly injured by the overturning of his machine, but it is thought he will recover.

Forty-nine cars started in the race, of which number only 23 survived. From the very beginning a furious pace was set up, and excitement was at a fever heat among the spectators. Szisz (Renault), Thery (Brasier), and Bablot (Brasier), all broke the record for the round on their first lap. Wagner (Fiat), and Salzer (Mercedes), however, bettered even that, and the former captured the record for the fastest round, averaging the entire distance at the rate of 78½ miles an hour, and thus adding one more laurel to German's wreath.

A breeze sprang up as the second lap was in progress, and rapidly ripened into a gale, which somewhat impeded the drivers. The leaders soon began to weary of their pace and one by one fell back, while the usual tire troubles also began to have their effect. Lautenschlager forged to the front in the fourth lap, and held that position to the end of the race, driving with remarkable uniformity, and in luck as to tires and minor mishaps.

France's consolation was that the drivers of the two Benz cars which finished second and third, were Frenchmen, and that Hemery distinguished himself by the most signal display of pluck ever witnessed in connection with an event of this description. When the race was half over a stone thrown up by the wheels, struck his goggles, shattering them, and driving a bit of glass into one of his eyes. He continued on the the tribune and called for a physician, but upon examination it was found that the particle could not be removed. Refusing to discontinue the race, he submitted to an injection of cocaine, and continued to the dramatic finish.

Italy, represented by six cars at the start, had the discomfort of seeing all but two of them drop out of sight, only Cagno and Fournier, the latter veteran winner of the Gordon Bennet race of 1901, finishing in 11th and 20th places, respectively, with their Itala cars. Two of the three Belgium and two of the six English cars survived.

The crowd was the greatest ever assembled for such an occasion, and assumed stupendous proportions, even on the first day, when the "Little Grand Prix" was run. Reports of the magnitude of such throngs always are uncertain, but the estimate of "nearly a million," in this connection, is one not easily forgotten. The drivers who finished the course, with their total times, were as follows;

No.	Driver, Car, and Country.	Time.
1	Lautenschlager, Mercedes, Ger.	6:55:43⅘
2	Hemery, Benz, Germany	7:04:24
3	Henriot, Benz, Germany	7:05:13
4	Rigal, Clement-Bayard, France.	7:30:36
5	Poegge, Mercedes, Germany	7:32:31
6	Joerns, Opel, Germany	7:39:40
7	Erbe, Benz, Germany	7:43:21
8	Dimitrievitch, Renault, France.	7:54:12
9	Heath, Panhard, France	7:55:36
10	Perpere, Germain, Belgium	7:59:08
11	Cagno, Itala, Italy	8:07:56
12	Gabriel, Clement-Bayard, Fr.	8:11:44
13	Courtade, Motobloc, France.	8:12:42
14	Garcet, Motobloc, France	8:19:56
15	Caillois, Renault, France	8:19:57
16	Janatzy, Mors, France	8:24:44
17	Jarrott, Mors, France	8:39:20
18	Brabazan, Austin, England	8:42:50
19	Resta, Austin, England	8:46:50
20	Fournier, Itala, Italy	8:47:20
21	Opel, Opel, Germany	9:08:11
22	Degras, Germain, Belgium	9:13:34
23	Farman, Panhard, France	9:24:40

The winner's average speed was less than that of Nazzaro, last year's winner.

Germany's last notable victory was in 1903, when Jenatzy, also driving a Mercedes captured the Gordon Bennet Cup, which had been held by England. The two succeeding Bennet cup races were won for France by Thery, while the first Grand Prix, in 1906, was captured by Sisz, also for France. Last year, Nazzaro's victory upraised Italy's standard for the first time.

As a sort of curtain-raiser to the main race, and on the day previous, the Grand Prix de Voiturettes was run. Actually it was a huge demonstration of the type of light, low-powered car, which is having such tremendous vogue in Europe at the present time. Guyot, driving an 18 horsepower, two-cylinder Delange, captured the honors in this event, driving a steady race at the remarkable speed of 80 kilometers or nearly 50 miles an hour. The Sizaire & Naudin and Lion cars, which finished second and third, were driven by Naudin and Goux.

The limiting conditions for entries specified that the cars should weight 600 kilograms, or about 1,300 pounds, and that they should be listed at from $1,200 to $1,500. There were 47 starters, and 32 survivors. The race was spirited, though by no means spectacular. Accidents were of a minor nature, none of them resulting seriously to the contestants, despite the fact that no less than five of the pigmies were overturned at one point or another in the course. Like the big race on the following day, this was a Michelin tire event, no less than the first five cars carrying this equipment, while the first three places in the Grand Prix itself, were secured on the same reliable basis.

Exposition of Road Making Planned.

An extensive exposition of road-making materials and accessories is being organized as an adjunct to the International Congress which is to be held in Paris, October 11 to 18. How inclusive the scheme is, is shown by the fact that among its exhibits will be numbered such literature as maps and plans of construction, and data on cost of upkeep; tar, stone and wood paving materials; road rollers, tar-spraying apparatus, tools and appliances. One section will be devoted exclusively to a display of wheels for heavy vehicles, spring and elastic wheels, tires, anti-skidding devices, and springs and exles.

Not Running in Presidential Race.

Somebody has been going over the pages of the new Boston directory to cull out distinguished names borne by residents of that city. Among the names found was that of William H. Taft, who is proprietor of a garage in the Brighton district.

Salt Lake Organizes a Club.

The Salt Lake Automobile Club has been organized in Salt Lake City, Utah. with the following officers: O. H. Hewlett, president; L. L. Terry, vice-president; J. E. Jennings, secretary; C. R. Pearsall, treasurer.

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RAINY DAY MEET AT LONG BRANCH

De Palma Captures Two Events at Elkwood Park Opening—Two Thrilling Accidents Mar Exciting Contests.

Intermittent showers and a sloppy track resulting in several accidents, marred what otherwise would have proved a successful meet at the Elkwood Park mile track, near Long Branch, N. J., on Saturday last, 4th inst. It was the first meet of the newly organized Elkwood Park Automobile Association, and had the weather been favorable the attendance doubtless would have been record-breaking, several thousand spectators being in the stands despite the threatening weather.

A heavy shower at noon made the holding of the races seem doubtful but as it cleared up afterwards the promoters decided to take a chance and some time after 2 o'clock the first event—five miles for stripped stock cars—was called. Al Poole, on an Isotta, stalled his motor at the start and threw a shoe in the first lap, two things which put him out of the running before the race was well under way. Ralph De Palma, Allen-Kingston, jumped into the lead at the start, with Stewart Elliott, American, second, and Arthur Warren, Stearns, in third position. This order was maintained until the tape, De Palma, who drove a clever race, winning handily.

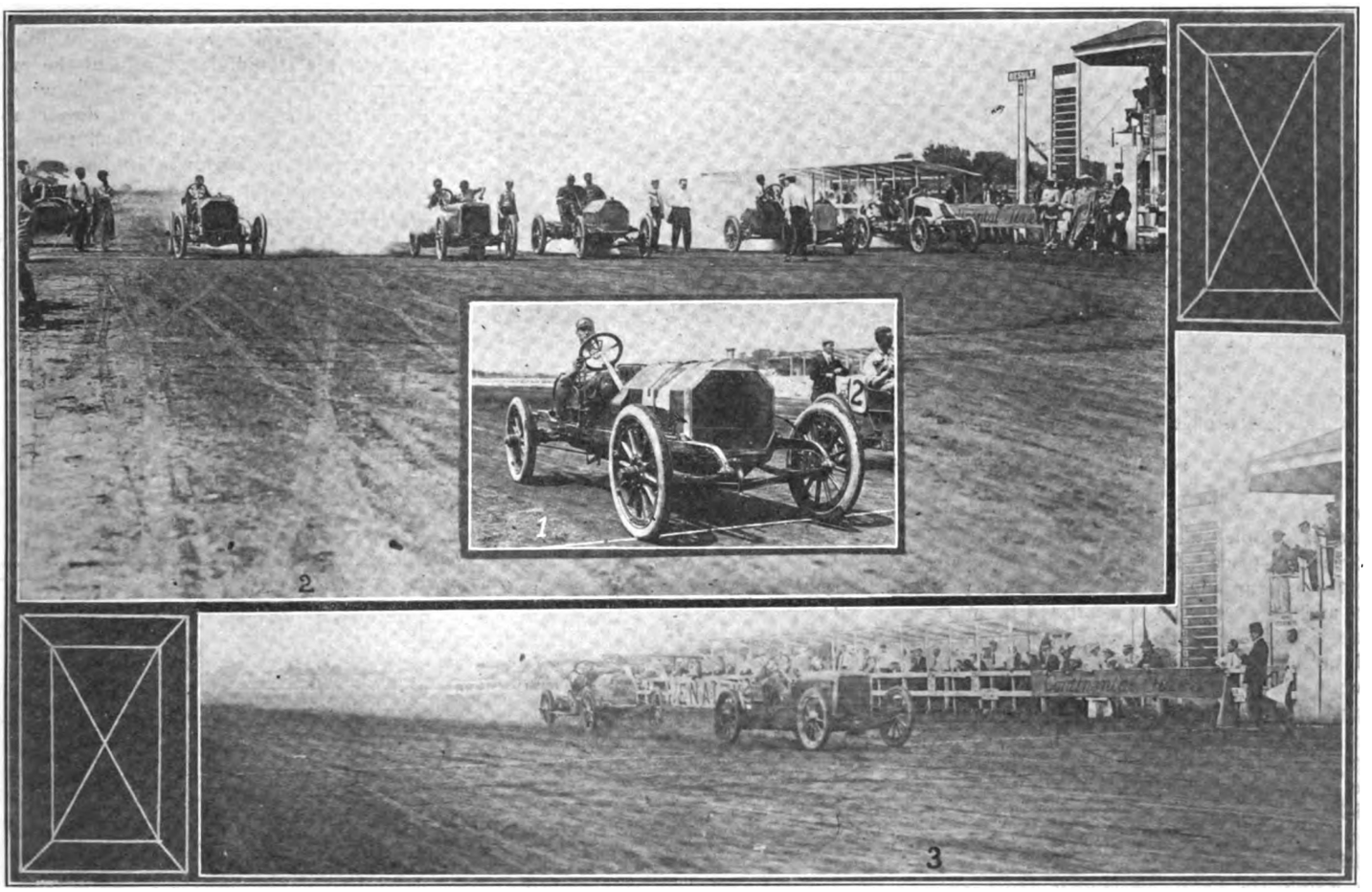
The amateurs had their innings in a ten miles open, which brought out five starters. James Doig, Stearns, proved the quickest starter, but he had not covered one lap before Stewart Elliott, in the American, got the lead. Elliott lapped W. B. Anderson, Welch, in the eighth mile and continued until the finish, with Doig second, and T. J. Scully, Packard, third. Time, 10:53.

Another shower came up about the time the amateur event was disposed of and after waiting a long time for it to blow over the 50 miles free-for-all, which had a cup and a cash prize of $100 to the winning driver, was started, with seven cars in line. The first smashup came in the first lap when Warren in the Stearns, and Fisher in the Auto car rounded the upper turn into the stretch together. The Stearns skidded in an oily pool, slewed diagonally across the track and turned turtle as it crashed into the fence. Warren jumped, but Crawford, his mechanic, was pinned beneath the car, and while in that position the Autocar banged into it. The driver and mechanic of the latter escaped injury, but the car was put out of commission.

Crawford and Warren were badly hurt. The former's left foot practically was severed from the body, while Warren had his collar bone and one leg broken. Both men were removed to the LongBranch hospital and a short time afterward the same ambulance had to make another trip. The second accident occurred in the 29th mile. Bellows, in the Renault, while in a brush with De Palma on one of the curves, hugged the pole too closely and went through the inner rail, tearing away thirty feet of the rotten fence before it overturned. Bellows was hurled some distance through the air while Meyer, his mechanic, in attempting to jump, landed head first, but broke his fall with his arm, which broke. Both men were badly bruised and shaken up. The accidents were too much for some of the spectators and they left the grounds.

Ralph De Palma assumed the lead after the fifth mile, and from then until the finish he was never headed, finishing the distance in 55 minutes 59⅗ seconds, fast time when the muddy track is taken into consideraton. Henry Lozier, in a car of that name, had covered 47 miles, and C. Frewin, Welch, 44 miles, when De Palma crossed the tape.

One of the best events of the meet was the 100 miles race for cars of the Briar-



1. RALPH DE PALMA (ALLEN-KINGSTON) WINNER IN TWO EVENTS. 2. LINED UP FOR START OF FIVE MILES RACE.
3. STEWART ELLIOTT (AMERICAN) WINNING EVENT FOR AMATEUR DRIVERS.

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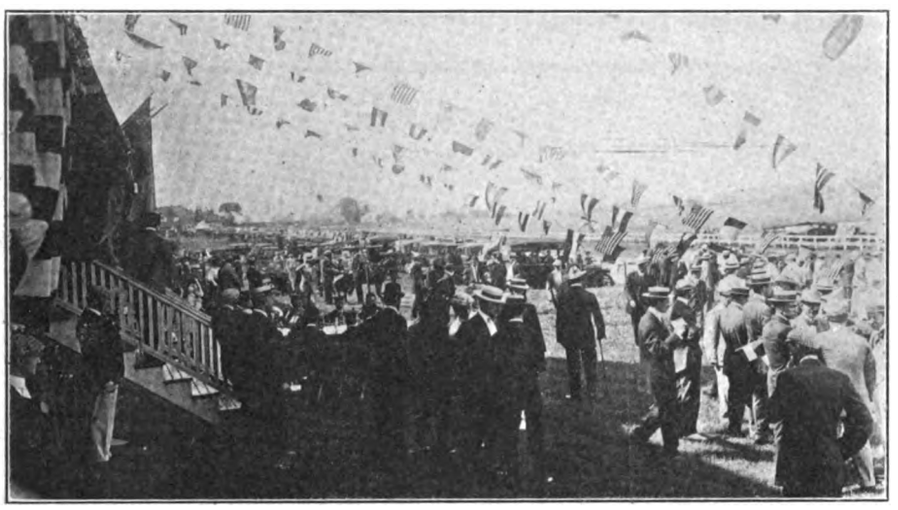
cliff race type, but it was due more to luck than to anything else that no casualties occurred. Slow time resulted as the drivers did not take any more chances than were absolutely necessary after the two accidents in the previous race, but despite their cautiousness the cars skidded all over the track at times. Heavy showers came down intermittently during the progress and the last half of the race was over a course so thick with oil and water that only in places was the surface of the track visible. The fight between Poole and De Palma was well worth the price of admission. The pair kept up a running fight from start to finish, and they were never separated by more than a half lap. The outcome was doubtful until Poole finally crossed the line 12 seconds in advance of young De Palma. Harry Lozier finished six miles behind, and Prossen in the Bianchi was fourth, having covered 90 miles. Both the Isotta and the Allen-Kingston cars were fitted with Michelin tires, which gave them three firsts out of a possible four. The summaries:

Five miles for stripped stock cars—Won by Ralph De Palma, Allen-Kingston; second, Stewart Elliott, American; third, Arthur Warren, Stearns. Times, 5:25⅘, 5:31⅗, 5:38⅗.

Ten miles, for amateur drivers—Won by Stewart Elliott, American; second, James Doig, Stearns; third, Thomas J. Scully, Packard. Times, 10:53, 11:07⅗, 11:42⅗.

Fifty miles, free-for-all—Won by Ralph De Palma, Allen-Kingston; second, Harry Lozier, Lozier; third, Charles Frewin, Welch. Time, 55:59⅗.

One hundred miles for Briarcliff type cars—Won by Al Poole, Isotta; second, Ralph De Palma, Allen-Kingston; third, Harry Lozier, Lozier. Time, 2:10⅗.



SCENE ON THE LAWN IN FRONT OF THE GRAND STAND

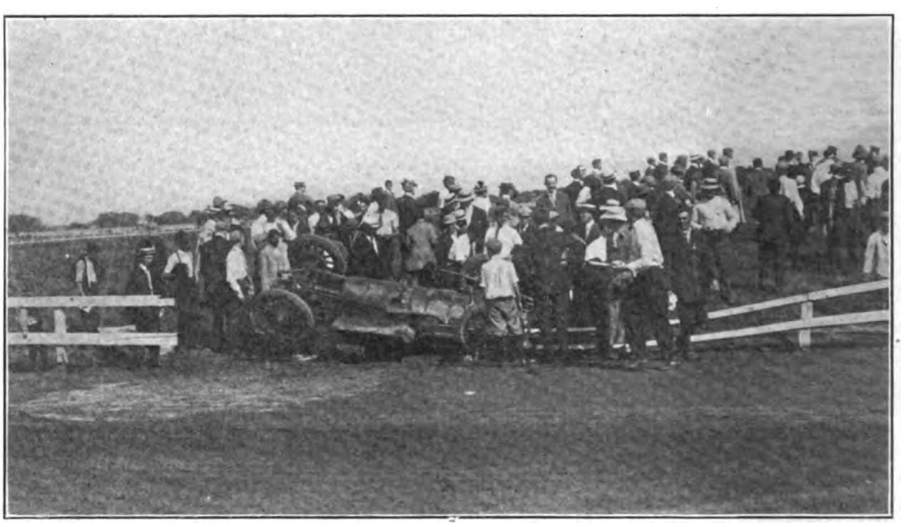
Two New York-Paris "Racers" Crippled.

Ill fortune has beset both the American and the German contestants in the New York-Paris "race" since the last bulletin of their progress appeared in the Motor World. Both the Thomas car and the German Protos car have suffered serious delay, and this proved especially trying to the American crew because of the fear that the Germans again had got ahead of them. The fear, however, proved groundless. The Protos car did not reach Omsk until the 3d inst., and it was in such need of repairs that it had to remain there until the arrival of new parts required.

Shuster, on the Thomas, left Omsk early in the morning on Wednesday, 1st inst., and got along smoothly until after crossing the Irtish river, 30 miles from Omsk, a swamp a mile wide was encountered. When nearly across the car cut through the straw with which the road had been covered to prevent wagons sinking, and the strain attending the attempt to get out cracked two teeth of the driving gear, leaving the car unable to run.

It was necessary to get a block and tackle and haul the car out of its position. Men, women, and children from the near-by village of Marianovka meanwhile gathered to see the car, and, learning its plight, all of them volunteered to help. They all took hold of the 200-foot rope, and in an intended triumphant march, dragged it into the town.

Shuster immediately returned to Omsk in a peasant car to get the extra driving gear, which had been expected at Omsk. The car was able to proceed on the 4th inst., though still severely crippled.



WHERE ARTHUR WARREN'S STEARNS TURNED TURTLE

Bermuda Losing Through Exclusion.

As a result of Bermuda's exclusion of the automobile, commercial interests already have begun to suffer, owing to the large number of absentees during the season. It is stated by the former transient inhabitants of the island that many of the more charming scenes are inaccessible without the fast conveyances, and that they cannot reach all the drives or visit all the beautiful sections in Bermuda in horse drawn vehicles on account of the distances. As a result most visitors are denied many of Bermuda's beauties. Already a road or speedway for the exclusive use of automobiles and fast horses, running from St. George's to Ireland Island, has been proposed, the idea being to support it by the collection of tolls.

Hoffman First in Race at Tuxedo.

W. M. V. Hoffman, driving a Packard, won the automobile race that formed a feature of the Fourth of July games at fashionable Tuxedo Park, N. Y. The course was 1⅓ miles long and Hoffman covered the distance in 1:07. Richmond Talbot, Fiat, was second, and W. M. Weygant, Locomobile, third.

California Reliability Run Postponed.

The reliability run promoted by the Automobile Dealers' Association of California, which was to have been held July 3 and 4, has been called off. Conflicting dates made the entry list small and for this reason an indefinite postponement was deemed advisable.

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KEEN COMPETITION AT WILDWOOD

Schill Lowers Local Mile Record—Fourteen Perfect Scores in Reliability Run Preceding the Carnival.

A crowd estimated at 20,000 witnessed the Independence Day meet of the Motor Club of Wildwood, N. J., held on the level Central boulevard, the feature of which was the breaking of the record for that mile straightaway stretch by Paul Schill, of Philadelphia. Schill drove a 120 horsepower racing car and covered the distance in 42⅗ seconds, which was 1⅗ seconds better than the time made by Montague Roberts at the meet last year.

Schill's fast flight was accomplished in the time trials for all classes and in this event the contestants had better opportunity to speed than in the stock car events that preceded the piece de resistance of the day. The stock cars had to go against a strong head wind, but when the time trials were put on the direction was reversed. William Haupt, the Philadelphia young man who has been doing hill climbing stunts all the season, disappointed his many followers as they confidently expected him to win in a walk, and they had backed up this expectation with real Quaker City spending paper. Haupt made three trials, but he failed to touch Schill's record, his fastest trial being recorded in 43⅗ seconds.

Rain in the early morning cast a gloom over the thousands of people that poured into the resort, but before 10 o'clock the sun came out strong and from then until the close of the meet the weather man was favorable. Despite the immense crowd that lined both sides of the boulevard, the policing by the North Philadelphia Boys' Brigade was all that could be desired.

Although the nine events were not filled as well as they might have been the competition was keen throughout, and in spite of the head wind the stock cars made fast time. Walter Cram, driving a Mitchell, won in the class for cars between $1,251 and $2,000, in 1:33, but this time was reduced in the class for cars between $2,001 and $3,000, when Frank Lescault, Palmer & Singer, defeated Len Zengle, Pennsylvania, and George Davis, Apperson, in this order in 1:13⅗.

Thomas cars got first and second in the event for cars between $3,001 and $4,000, W. Mullen finishing first and W. M. Magraw second. W. J. Sprankle, in a Premier, was third. Mullen also won a special event.

Schill won both the open for four cylinder gasolene cars and the free-for-all, but his fastest time was made in the time trials. The summaries:

Gasolene cars selling under $1,250—Won by Edward Wilkie, Buick; second, Walter Cram, Mitchell; third, W. H. Ford, Overland. Time, 1:28⅗.

Gasolene cars selling between $1,251 and $2,000—Won by Walter Cram, Mitchell; second, W. H. Ford, Overland. Time, 1:33.

Gasolene cars selling between $2,0001 and $3,000—Won by Frank Lescault, Palmer & Singer; second, Len Zengle, Pennsylvania; third, George E. Davis, Apperson. Time, 1:13⅗.

Gasolene cars selling between $3,001 and $4,000—Won by W. Mullen, Thomas; second, W. F. Magraw, Thomas; third, W. J. Sprankle, Premier. Time, 1:04⅗.

Open for four cylinder cars over $4,000—Won by Paul Schill, Fiat; second, Charles J. Swain, Apperson; third, H. Goodin, Stearns. Time, 0:53⅗.

Six cylinder cars—Won by F. J. Nordell, Chadwick; second, Joseph Parkin, Jr., Parkin. Time, 1:00.

Free-for-all—Won by Paul Schill, Fiat; second, Joseph Parkin, Jr., Parkin; third, W. Chalmers, Chalmers-Detroit. Time, 0:49⅘.

Time trials—Charles J. Swain, Apperson, 0:52⅗; Paul Schill, Fiat, 0:44⅗, 0:45⅗, 0;42⅗; William A. Wood, Cleveland, 1:13⅗; Joseph Parkin, Jr., Parkin, 0:53⅗, 0:53; W. Chalmers, Chalmers-Detroit, 0:51⅗; George E. Davis, Apperson, 1:06⅗; Edward Wilkie, Buick, 1:13⅗; Walter Cram, Mitchell, 1:18; W. F. Magraw, Thomas, 1:01⅗; William Haupt, Chadwick, 0:45⅘, 0:43⅘, 0:42⅗.

Special event for gasolene cars selling between $2,001 and $3,000—Won by W. Mullen, Thomas; second, Len Zengle, Pennsylvania; third, George E. Davis, Apperson. Time, 1:02.

The feature during the morning was a decorated parade on the boardwalk in which a score or more of cars participated. The prize for the best decorated cars went to W. Wayne Davis, Matheson.

The curtain raiser to the meet on Saturday was a reliability run from Gloucester City, N. J., a few miles below Philadelphia, to the shore, and although a number of cars started many had to turn back because they had failed to comply with the New Jersey laws. Twenty-four of the starters finished, however, with fourteen of that number in the perfect score class. As there was only one prize, a cup, it was agreed that the perfect scorers should draw by lot, the unlucky thirteen receiving certificates. The cup was drawn by J. M. Hendricks, Chadwick, the other finishers being:

W. F. Magraw, Thomas; H. Greenwood, Premier; D. H. Beck, Packard; E. Humphreyville, Stanley; B. Thorpe, Studebaker; W. H. Taylor, Reo; E. A. Wright, Oldsmobile, J. D. Avil, Pope-Hartford; W. J. Spronkle, Premier; J. H. Hendricks, Chadwick; Walter Cram, Mitchell; E. A. Jackson, Mitchell; W. Freitg, Mitchell; D. Little, Mitchell; A. J. Bankard, Dragon; A. A. Jones, Ford; W. T. Wilkinson, Packard; W. H. Ford, Overland; J. W. Parkin, Parkin, and Turner Sharp, Winton.

An open air show Friday evening arrested the attention of the boardwalk promenaders, the racing cars being on exhibition.

SURPRISES AT BALTIMORE MEET

Morton Beats Favorites in Pimlico Handicap—Leinbach Wins a Championship—Wagner Exposes Trickery.

Although there was a multiplicity of events on the boards at Baltimore on the Fourth, more than 3,000 persons turned out to witness the race meet projected by the Motorcar Racing Association. Louis Bergdoll, of Philadelphia, who had been advertised as one of the features of the meet, and the only man looked upon to have a chance against E. L. Leinbach, the local, failed to show up, but despite his nonappearance the events were run off smoothly and without accident, excepting in the motorcycle match race, when Thomas skidded in a wet spot and ran into the fence.

The ten miles Pimlico handicap proved the feature automobile event of the meet and it resulted in some surprises. Leinbach was on scratch, with Wallace Hood, Thomas, of Washington, on ten seconds. The wise "fans" had it all doped out that there was nothing to the race but Leinbach first and Hood second. They were, consequently, somewhat surprised when Hood, after making a spurt at the start, faded away in the ruck, while Leinbach could not make up the distance because of the fast pace set by Morton out in front. Roy Stains and Morton held together most of the way, until a mile to go, when the latter took the lead and sprinted for the tape. Leinbach got an easy third.

The Maryland runabout championship at 10 miles created some interest and Leinbach was the favorite. Starter Wagner discovered two tanks on Hood's car and would not let him start. This left Leinbach with practically no opposition and after nosing out a lead at the start he cakewalked home in blue ribbon fashion.

Three starters lined up for the baby runabout event at five laps, and Jefferson Davis assumed command of the run at the start. He was not allowed the position long before Robert F. Kaehler's little Ford rushed to the front and after that there was nothing to it but him.

As the 50 miles event was for cars of 45 horsepower and under, Leinbach did not have a chance for a walkover. Morton jumped into the lead at the start and ran in front from then until the finish. The second Pullman car dropped out on the 28th mile with tire trouble, and John Auchfield finished second.

While these cars were tuning up for the race a motorcycle match between Mangold of Washington, and Thomas of Baltimore, was arranged. Thomas got off first to a flying start, but on the backstretch Mangold overhauled and passed. At the three-quarters pole the watering cart had left a wet spot and Mangold slowed when he saw it.

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Thomas took a long chance and tried to come through on the pole. His machine slipped from under him and he bumped into the fence. He was considerably bruised and cut, but was able to hobble off the track.

Mangold won the five miles piston displacement handicap for motorcycles, starting with 20 seconds handicap. Thomas started from the same mark and the fight between the pair was interesting. W. S. Fisher, a 30 seconds man, was third. The summaries:

Five miles for runabouts costing under $1,250—Won by Robert F. Kaehler, Ford; second, Jefferson Davis, Cameron; third, George E. Norwood, Overland. Time, 6:59.

Ten miles, Maryland runabout championship—Won by E. L. Leinbach, Stearns; second, Roy Stains, Pullman; third, Robert Morton, Pullman; fourth, J. F. Brown, Autocar; fifth, E. H. Freas, Autocar; sixth Chester Smith, Autocar. Time, 11.04⅗.

Five miles for stock touring cars between 20 and 40 horsepower—Won by Robert Morton, Pullman; second, E. L. Leinbach, Moon. Time, 6:06.

Five miles motorcycle piston displacement handicap—Won by M. E. Mangold, Indian (20); second, Chic Thomas, Indian (20); third, W. S. Fisher, Indian (30). Time, 5:49.

Ten miles free-for-all handicap—Won by Robert Morton, Pullman; second, Roy Stains, Pullman; third, E. L. Leinbach, Stearns. Time, 10:36.

Fifty miles for stripped stock cars not exceeding 45 horsepower—Won by Robert Morton, Pullman; second, John Archfield, Autocar; third, A. W. Behrens, Maryland; fourth, J. F. Brown, Autocar. Time, 57:08.

One mile motorcycle match—Won by M. E. Mangold, Indian. Time, 1:20. Chic Thomas fell.

Somerville's Fourth of July Parade.

Automobile owners contributed largely to the success of the ambitious celebration of Independence Day which was held in Somerville, Mass. Nearly 100 cars were included in an automobile parade over a twelve miles route. They moved in four divisions, the first consisting of decorated vehicles and the last comprising specimens of the vintages ofearly days in the history of motoring. Three prizes were offered for competition in the decorated division. John H. MacAlman won the first prize with his large touring car which was decorated with wistaria and yellow fabric. Mrs. F. A. Dutton, who won second prize, drove a large car covered with rambler roses and laurel, even the wheels being masses of floral beauty. Mrs. Fred C. Kendall, third prize winner, had a very pretty turnout, her runabout being trimmed with wistaria, while Mrs. Kendall and her companion, Mrs. G. L. Wehre, wore white gowns and purple picture hats, carrying parasols to match. The route of the parade was profusely decorated.

WESTCHESTER WANTS FAIR PLAY

Prominent Residents Organize a Roads Association—Aims to Secure Sane Enforcement of Automobile Laws.

With the lofty purpose of "arousing and solidifying public opinion against unnecessarily severe automobile laws and ordinances," among its objects, the Westchester Roads Association, composed of residents of Westchester county, N. Y., has been incorporated. That among its objects also is numbered the purpose of protecting the interests of Westchester county real estate, also is to be inferred from the list of officers composing its directorate, as well as from the direct avowal of Secretary John R. Faure, who explained, in reference to the organization of the association:

"Something must be done for the protection of real estate values in Westchester County. Many good people come riding through the county, fall into a foolish automobile trap, are held up, arrested, fined, and subjected to a great deal of unwarranted annoyance and sometimes humiliation. . . . . Of course, some automobilists ought to be arrested, but it is the ridiculous laws and ordinances and the ridiculous enforcement of them that is hurting the county."

That the association has not been formed without due provocation, is shown by the fact that nearly the whole of Greater New York is at present encircled with a belt of speed traps, most of which are worked with great vigor and small regard for the personal feelings of the motorists. A bright and shining light in contrast to the general rule in this respect, is the chief of police of Port Chester, N. Y., who instead of establishing speed traps, makes it a practice to deliver a printed card of welcome to visiting motorists, which bears a polite request that the speed laws be not violated in his particular domain.

The officers of the Westchester Association are: President, I. D. Bristol, Chappaqua; vice-president, J. Mayhew Wainwright, Rye; treasurer, Walter W. Law, Jr., Briarcliff Manor; secretary, John P. Faure, Ossining. The vice-presidents in addition to Mr. Wainwright are Seth Low, Bedford Station; V. Everit Macy, Scarsborough; John McKesson, Jr., Mt. Kisco; J. J. Riker, Port Chester; F. C. Stratton, Mt. Vernon, and F. M. Warburg, White Plains.

Putting the Traps out of Business.

The best offset to speed traps is observance of the law by automobilists. This fact was illustrated on Sunday, 5th inst., by the poor returns in fines imposed through the operation of a trap established by the authorities of Hempstead, L. I., on the Bethpage turnpike. A stretch of the pike was measured off and a number of deputies were posted there with stopwatches. Instead of the large number of fines that were expected from arrests there were only two drivers arrested and one was fined $25 for going at what the deputies said was 64 miles an hour, while the other man paid $10 for traveling at 34 miles an hour. One of the drivers arrested notified the Long Island Automobile Club of the location of the speed trap and the club sent out men with cards asking drivers to slow down through the district, the result being that the deputies found their occupation gone from then on, as none of the motorists drove their cars at a faster pace than is allowed by law.

At a meeting of the Massachusetts Automobile Owners' Association, held in Boston on Thursday, 2d inst., it was voted to expend a considerable sum of money to rid the Commonwealth of automobile traps. The plan is to have men in khaki uniform stationed at or near places where the police have located traps, and to ask every automobilist to drive slowly through the particular part of the highway which is being guarded. A card will be handed to every automobilist, and it is expected that this work of the association will have a beneficial effect. The card will read as follows: "Please respect the wishes of the people of this town and drive slowly. Automobile Owners' Association, 1016-1017 Beacon building, 6 Beacon street, Boston. Francis Hurtubis, Jr., Counsel. Telephone, Haymarket, 970."

Atlantic County Again Polices Roads.

At the instigation of the local farmers, the Atlantic County (N. J.) board of freeholders, last week adopted a resolution for the reappointment of seven special automobile constables to do duty on the county highways during the summer. A movement was on foot to eliminate this year, the special constabulary, which was appointed last year for the first time, it is said. The farmers, getting wind of the attempt, circulated a petition which, reinforced with more than 200 names, was presented to the board at its last meeting, when the desired action was promptly taken. The appropriation required for the policing of the roads in this way provides for a salary of $60 a month for each of the special officers.

Political Caravan a Big Success.

The unique trip taken by the Illinois delegates to the National Democratic convention, from Chicago to Denver in five Studebaker automobiles, has not only given the delegates themselves a good time and a novel experience, but has been a source of gratification to its promoters because of the entire success with which the project was carried out. No small part of the honors is claimed for the Diamond tires with which the cars were equipped, the only tire trouble in the whole distance and for all five machines being four punctures, every original tire making the entire trip and arriving in Denver in good condition.

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EXPERTS DISCUSS ROAD PROBLEMS

Three National Bodies and Many States Represented at Buffalo Convention—Important Resolutions Adopted.

With the unanimous adoption of the set of resolutions reported by Charles Thaddeus Terry, chairman of the committee on resolutions and counsel for the American Automobile Association, by which the American Roadmakers' Association, the National Grange and the American Automobile Association pledge themselves to work for the election of national and State legislators who will support the uniform State motor vehicle bill proposed by the A. A. A. and the enactment of the Federal automobile registration bill, the Good Roads and Legislative convention, which was held in Buffalo on Tuesday and Wednesday of this week, showed the first tangible result of the conference which had already given promise of playing an all important part in the development of American highways.

The convention opened in Buffalo, N. Y., on Tuesday with an attendance well up to the expectations of the promoters. Three national organizations were represented—automobile men, farmers and road makers—making the convention the most important and influential for the improvement of the highways that has ever been held in this country. The business of the convention consisted in the main of addresses by men who are recognized authorities on the subjects on which they spoke. A practical as well as educational feature of the program was provided by showing the delegates different kinds of highways in the process of construction, for which purpose several miles of roadway in the vicinity of Buffalo were exhibited in various stages of completion.

One of the important papers read was that of State Engineer Frederick Skene, of New York, embodying a brief historical sketch of the road system of New York State. In regard to the importance of the highway improvement propaganda, he said:

"The necessity for the improvement of the highways of this State is now so well established that argument is scarcely necessary, but in case objections should be raised to the cost of the work, it is well to bear in mind the fact that during the period of 10 years prior to the inauguration of highway improvement by State aid, the United States Government statistics showed a decrease in farm values in only four States of the Union, the greatest occurring in the State of New York and amounting to upward of $70,000,000. Resting, as our prosperity does, upon the financial welfare of the farmers, there can be no question but that any moneys expended for the improvement of the means of intercourse and the transportation of the 12,000,000 tons of farm produce annually raised in this State will ultimately result in benefit to the whole State."

L. W. Page, director of the United States Office of Public Roads, touched upon the delicate subject of "The Effect of Automobiles on Public Roads." He said:

"The pneumatic tire or any type of tire which propels a vehicle," said Mr. Page, "must have sufficient tractive resistance to overcome the load of the vehicle. This, of necessity, must cause a shear on the road surface which varies with the weight and speed of the vehicle. The broken stone road surface has little power to resist a shearing stress, consequently the fine material of which it is composed is thrown into the air. Once lifted from the road, this fine material is subject to the effect of air currents generated by the car body, and subsequently by the wind. In this manner large quantities of the material of which the road is composed are carried from the road and must eventually be replaced, or the road will rapidly deteriorate. Aside from the dust carried from the road in this manner, this shearing force of the motor car has a decided disintegrating effect on the surface of the road."

Of the two remedial courses at hand, one was that of constructing new roads in such a manner as to reduce to a minimum the formation of dust, and the other, to treat existing roads with materials which will give the same results, he stated. How these will work out in practice he did not attempt to predict.

Other prominent speakers were: F. N. Godfrey, master of the New York State Grange; Senator Jotham P. Allds, of Norwich, chairman of the Joint Legislative Committee; Stephen Ryan, State road director in New York State; A. W. Campbell, deputy minister of public works of the Province of Ontario; James H. McDonald, president of the American Roadmakers' Association; Horatio S. Earle, State highway commissioner of Michigan; Joseph W. Hunter, State highway commissioner of Pennsylvania; A. N. Johnson, State engineer of Illinois; R. D. Beman, deputy State highway commissioner of Pennsylvania; James E. Owen, of the Newark (N. J.) Board of Trade; Robert B. Caverly, president of the Automobile Club of Washington, D. C.; William L. Raeder, president Board of Trade, Wilkes-Barre, Pa.; Charles J. Glidden, of Boston; Horatio S. Earle, State highway commissioner of Pennsylvania; Robert P. Hooper, chairman Good Roads committee, American Automobile Association; Harold Barker, chairman Massachusetts highway commission; J. W. Abbott, ex-United States highway commissioner for the Rocky Mountain and Pacific Coast States; ex-Governor N. J. Bachelder, of New Hampshire, master of the National Grange, and A. R. Pardington, general manager of the Long Island Motor Parkway. The discussion touched on all aspects of the highways problem as it exists to-day.

FOREIGNERS FROWN ON A. A. A.

International Committee Refuses Courtesy of a Hearing—A. C. A.'s Victory Threatens Complications.

What it hailed as a strategic and signal victory for the Automobile Club of America over the American Automobile Association in the fight which the former is making to wrest away the control of automobile racing in the United States, took place at the annual meeting of the committee of the international association of recognized automobile clubs on July 6, at Dieppe, France, when the committee decided to ratify the action of the sporting committee of the Automobile Club of France in threatening disqualification for any French constructor who would take part in this year's Vanderbilt cup race under A. A. A. auspices, unless the Ostend rules are adopted. The committee further decided to recognize only the Automobile Club of America in relation to international racing affairs so far as the United States is concerned.

Although W. K. Vanderbilt and A. G. Batchelder endeavored to appear before the committee to present the statement of the American Automobile Association, they were denied admittance, while Dave Hennen Morris, for the Automobile Club of America was given a hearing. The A. A. A. side of the controversy fell to Count Adalbert Sierstorpff, president of the German Automobile Club, and he set forth that the A. A. A. is the larger and more powerful organization, that its control of American racing is legitimate, and that it had never been properly notified of the adoption of the Ostend rules, which have not been observed in making the plans for the Vanderbilt event.

The committee, however, felt piqued at the A. A. A. disregard of its rules governing international racing events, and after much heated discussion decided that for the present it would recognize only the Automobile Club of America, with whom it has for some years been on terms of reciprocity.

This action may in no small degree be attributed to the very active campaign that the Automobile Club has been making in the foreign press and by personal influence to persuade the racing interests on the other side of its magnified position and importance in the sport, as opposed to the apparent indifference of the Association as to the international situation. That the affiliations of the A. A. A. with the Amateur Athletic Union and through it with the governing bodies of all sports across the water will embarass the association of recognized automobile clubs in its ill-advised action, however, is a certainty, and a subsequent recession from the position it has taken may be looked for.

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LAW BARS IMITATION PRODUCTS

Decisions Stamping Their Sale as Unfair Competition in Trade—Lack of Patent or Trademark Non-Essential.

Closely allied to the patent infringement and price cutting evils which so strongly menace the stability of all trade interests, is the imitation of wares, which constitutes a direct encroachment on the proprietary rights of the original manufacturer, even though no absolute patent or trademark infringement may exist. In many instances where specific protection does not exist the copyist may be held in check by the application of the trade mark law, under the head of "unfair competition,"—a phrase which should carry a broad and clearly defined meaning to every manufacturer and dealer.

A most suggestive case in point is that of the well known manufacturer of ignition apparatus, who found that the reputation of his product was being assailed because of the failure of certain of his specialties to give service for the full length of time which they might with reason be expected to last. After a long and searching examination by the manufacturer's experts, it was discovered that the cause of the trouble was in the wearing parts, which had been replaced by others made in imitation of the original by an unscrupulous manufacturer. The manufacturer believed that such pernicious practices could be stopped, and to the end of stopping them, put the matter in the hands of his attorney for action by law. Instantly the cause of the trouble was removed, by the simple process of calling to the attention of the imitating manufacturer the several decisions covering this point, which the courts had rendered. The offending maker saw the light, and averted a law suit by ceasing the practice of supplying parts which so closely imitated the original.

This case was placed in the hands of T. F. Bourne, 220 Broadway, New York City, whose views concerning the bearing of patents on the price cutting situation, were printed in these columns recently. When seen by a Motor World man early this week Mr. Bourne proved willing to talk of the steps which may be taken in suppressing imitation, under the head of unfair competition. His definition of the phrase which, probably has no specific meaning to many to whom it should be familiar, is as follows:

"'Unfair competition' is a term broadly used to express the doctrine that one person may not so dress up his goods, or the packages containing the same, that dealers may be enabled to palm them off upon the public as and for goods of the original manufacturer, irrespective of any particular trade mark rights that such manufacturer may have. This is very important in many instances, as where a manufacturer has built up a valuable trade without depending upon a trade mark, and the public has become acquainted with his goods by reason of their particular appearance or by the style of package or appearance of the label thereon. If others were permitted to sell their goods having such near resemblance to those of the original manufacturer as to be likely to deceive, a great injury would be done to such manufacturer, as well as to the public.

"The courts are very strict in restraining unfair competition, and to obtain such protection it is not necessary that a manufacturer have a strict technical trade mark for his goods," he continued.

"In the case of Church et al. vs. Russ, 99 Fed Rep., 278, the court held:

"'The underlying principal of each case (unfair trade and technical trade mark) is the same, namely, the prevention of that which in its operation and results, and usually in intention, is a fraud upon the public, and an injury to the rival trader.'

"With respect to a trade mark, irrespective of unfair competition, in Gannett vs. Rupert, 127 Fed. Rep., 962, the court said:

"'It is of no moment that the proof fails to show deception, confusion or injury to any marked extent. Such proof is unnecessary where infringement of a valid trade mark is clearly established.'

"In Consolidated Ice Co. vs. Hygeia Distilled Water Co., 151 Fed. Rep., 10, regarding the infringing trade mark, the court said:

"'It is enough that it is so used as to be likely to produce confusion as to the origin of the article to which it is applied. This sufficed to warrant the granting of an injunction. . . . . '

"I have referred to the trade mark cases above to show the analogy to cases on unfair competition in trade. There are two recent cases showing how far the court has gone in restraining unfair trade, even though the plaintiff had no patent or trade mark.

"A manufacturer of tobacco had for a number of years placed tin tags of peculiar shape, with a dark background and a word thereon, upon tobacco plugs, and had largely advertised the tobacco. Later the defendant put upon the market a cheaper grade of tobacco with plugs of the same size and shape, with tags thereon of the same size, shape, style and colors, the only difference being in the name, which the defendant did not copy, and which name could be distinguished at a short distance. The evidence showed that the simulation was intended, and did in fact deceive customers who intended to buy the plaintiff's tobacco. It was held that the same constituted unfair competition and entitled the complainant to an injunction. In this case the question of technical trade mark was not the point in issue.

"In another case, Yale & Towne vs. Alden, 154 Fed. Rep. 37, a manufacturer of padlocks who made a lock upon which there was no particular patent or trade mark, brought an action to restrain the defendant from selling padlocks in imitation of the appearance of plaintiff's padlock. The court said:

"'A comparison of the exhibits satisfies us beyond any doubt that the defendant had so closely copied the plaintiff's padlock in form, size, coloring, lettering and details of finish that his articles are likely to induce purchasers to buy his padlocks supposing them to be the padlocks of the plaintiff. . . . . The defendant has, with a purpose taken the design and dress of the plaintiff's padlock. He has carefully copied it, differentiating his own from it in minor details probably intending to escape the charge of infringement; but he has gone a step too far when he has produced a padlock which to casual observation is substantially identical in appearance with the plaintiff's. His apparent purpose was to extend his trade with retail dealers and supplant the plaintiff's sales to such dealers by furnishing them with an article which could be sold readily to customers as the article made by the plaintiff."

"The defendant was restrained from thus imitating the style and dress of the plaintiff's goods.

"The foregoing extracts show the dangerous ground to traders who copy the goods of others, whereby to enable the substitution of the copy or simulation for the original product, and where such acts are liable to cause confusion and deception the courts will not hesitate to restrain the same."

Motor Vehicles Multiplying in Saxony.

Statistics covering the use of motor vehicles in Saxony show that their use is increasing at a rate which is nothing short of remarkable. Up to January, 1907, 805 automobiles were registered. At the beginning of this year, returns covering the registrations for last year revealed a total of 1,352. The total number of vehicles including motorcycles, increased from 2,221 to 3,259, comparing the registrations of last year and the year before. Of the total number registered at the beginning of this year, 1,580 were used for technical and business purposes, 302 were employed by physicians, surveyors, etc., and the astonishingly low proportion of 1,182 for purposes of recreation.

New Jersey Registration Large to Date.

Registration figures at the office of J. B. R. Smith, State commissioner of motor vehicles for New Jersey, show that the total registration under the new law to July 1st was 11,400 machines. The revenue received by the State from these registrations was $83,850, which sum, together with all other income derived from the same source, will be used for road maintaining. Up to July 1st of last year, 8,521 machines were registered, the amount received being $41,800. The total registration for the year 1907 was 17,694 machines, bringing in a revenue of $85,694.

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MILLENNIAL JOYS FOR MOTORISTS

International Automobile League Proclaims Message of Bedrock Prices and Universal Convenience.

That sadly misused individual, the "private owner" or "consumer," for whom many pretentious sounding organizations have in the past been promoted, may take heart again despite the failures and "four-flushing" of previous efforts, because a new one has been started upon which he may set his hopes of deliverance from the ogre of "agents' and middlemen's profits." The new movement has its home in Buffalo, N. Y., and bears the impressive name of the International Automobile League (Incorporated, $50,000), which the promoters condense to "the I. A. L."

While just to start with the I. A. L. only pretends to reduce the cost of automobiling to its members by selling them certain brands of tires and accessories at less than the list prices, yet it has much greater things in store for them after it gets going well. Not the least of these is the opportunity which it is going to give them to invest in the stock of the "League's own rubber factory," the construction of which would permit the League to get "tires equal to those now costing $130 for $40; when it will be able to get tires equal to those costing $75 for $25; when the equal of tires now retailing for $45 will be bought for $15, and when an equal will be found for tires now retailing at $15 for $5, and still pay its stockholders handsome dividends."

All that the League needs is 50,000 members who will buy their tires from it. Thus provided with customers the organization could safely "have tire factories of its own for the manufacture of tires exclusively for its members."

But for the immediate present the I. A. L. contents itself with outlining the advantages of the magnificent conception on which it is at work for the benefit of those who join its membership. For the tourist there are grand things in prospect. The booklet which the League is issuing with a view to enlisting interest and eliciting ten dollar bills for memberships, tells about it thus:

"The automobile is becoming more popular every day as a means of touring. Long trips in automobiles are the order of the day now, but one drawback to the average owner is the expense and this is by no means confined entirely to hotel and garage accommodations. The running of the automobile eats up a lot of money itself. It is here again that the plan of the International Automobile League has especial merit. The League proposes to have in every city, town and hamlet in the country, tire houses, supply houses, garages, hotels and gasolene stations where the presentation of the League's membership or identification card or official automobile tag will have the same value as if presented at the houses representing the League in your own city. The line of tire houses, supply houses and garages will, therefore, stretch from coast to coast, so that your I. A. L. tag will be as good in 'Frisco as in New York, as good in New Orleans as in Duluth; as good in Toronto or Montreal, as in Hamilton or Windsor."

As to the potency of the I. A. L. tag, the promoters modestly refrain from intimating that the condition of its being "as good in 'Frisco as in New York," etc., is not a mere futurity but is probably an actuality at the present time.

"Quick additions to the ranks of the I. A. L.," the booklet continues, "will aid much in its further development and in the force of its organization, bringing additional benefits to its members, in that the League will be in a better position to make arrangements for special prices with houses at present outside its influence."

To lend conviction to the printed matter sent out, various pictures are introduced, suggesting the function of the I. A. L. in actual life. On the third page of the booklet is a picture of a doorway from which is emerging an automobile. At the side of the door is a large card, put up in time so that the photographer could get it in conspicuously, proclaiming that special garage service rates are given members of the I. A. L. No other garage sign or indication that the place photographed is really a garage appears in the picture, and no identification is possible from the caption, "One of the I. A. L. garages where special rates are given to members of the league." On the fifth page appears a half-tone of two automobiles on a country road, which is explained by an imaginary colloquy underneath, in which Tourist asks Farmer: "Can you tell me the name of the I. A. L. hotel in the city, please?" To this Farmer, in order to prove to the reader the completeness of the I. A. L. service, replies like a flash: "You will find the names on the I. A. L. signs just down the road." The names of the city or the road are not supplied with the picture.

Similarly in the next illustration, Tourist stops Pedestrian to find out where there is an I. A. L. garage, but Pedestrian dodges by telling tourist to keep on until he finds an I. A. L. sign. Unfortunately the tourist may still be driving vainly over the broad land trying to find either an I. A. L. hotel or garage, as no pictures are shown disclosing him arriving at either the one or the other, or even finding an I. A. L. road sign.

Lest any doubts arise as to there being I. A. L. hotels or supply stations, however, two especially taken photographs are reproduced, one showing the brass nameplate of an hostelry, with a paper "I. A. L." placard pinned below it, and the other in front of an automobile supply store, with an "I. A. L." card tacked below the window, where it will show up well in the picture. The top of the latter illustration is cut off at a point which conceals to some extent the store sign, so that it is impossible to even guess where it is located or the name of the proprietors. The location of the hotel is also in doubt. Nevertheless it appears from the booklet that all I. A. L. members can get special rates by going to these two places.

Most staggering of all is a picture "showing strings of tanks containing gasolene for use of members of the I. A. L." If any doubts existed as to the immensity of the organization, this illustration is calculated to banish them. For as far as the eye can reach there stretches a railway track on both sides of which are enormous Standard Oil tanks. Possession of the contents by the I. A. L. is suggested, but not positively asserted, by a temporary paper sign tacked to a cross bench, which latter was set in the middle of the railroad track when the I. A. L. photographer snapped his camera.

An air of confidential importance is given the prospectus by a notice printed on the back, which reads: "If this book is lost, kindly mail it to the address below, as it contains matters of importance only to its owner," following which are blank lines for name and address, which the recipient is supposed to fill in as a provision against the unhappy contingency of his dropping the precious document. The officers of the League are A. C. Bidwell, president; William Preiss, treasurer, and C. H. Bowe, secretary. The organization not only has officers, but it has "League colors" which are proclaimed as being "orange and black." The League yell has not yet developed, but will doubtless come out in due time.

How Pennsylvania Piles up Fines.

Whatever may be charged against the State of New Jersey for the high price it sets upon the pastime of motoring within its borders, there is no question that Pennsylvania law, if properly administered may eclipse it. At least, that is the conclusion at which one James Munyon, Jr., of Cynwyd, arrived after a brief sojourn in the town of Abington. After being there only about 5 minutes, he was arrested for violating the automobile law in no less than five different respects. The resulting fine averaged at the rate of something like $11.05 per minute. The bill which Magistrate Williams framed up for him was as follows:

Breaking speed regulation	$25.00
Running without rear light	10.00
Running on wrong license	10.00
Running without blowing horn at crossings	10.00
Costs in the case	2.60
Total amount	$57.60

Buckbee Heads Club of California.

At a meeting of the Automobile Club of California held recently, the following officers were elected for the ensuing year: President, Samuel G. Buckbee; Vice-President, George A. Newhall; treasurer, C. F. Kohl; secretary, L. E. Burks.

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WHY CITY CHAUFFEURS ESCAPE

Speeders with "Pulls" Develop Invisibility to Discreet Cops—Police Prefer Fines to Transfers.

In the not distant past a chauffeur in the employ of the municipality was arrested while driving at a high rate of speed a city owned automobile containing the official to whose use the car was assigned. The fact of a city employe being arrested for automobile speeding was not, in itself, of more than passing interest, for though the members of the police department usually "fail to see" a swiftly moving automobile if they know that it is the property of the city, the general subject of the arrest of speed mad chauffeurs is so frequently commented on in the daily press that one arrest more or less excites little or no comment from the public.

The arrest of a municipal chauffeur suggests, however, an interesting question, and the answer to it seems to have been given by the police sergeant who refused to "fail to see" the motor car that was going over the public thoroughfare at a speed which threatened the safety of others who were on the highway.

Though the day when the arrest occurred was the Sabbath, the question that was answered bore no relation to the subject as to what kind of "city business" required the city official's attention at a time when the other members of the department with which he was connected were away from their duties, presumably in their respective homes, but it was the question as to whether or not a city official, i. e., a public servant had rights and privileges which are denied the hoi polloi, and the policeman answered "no."

The reckless, devil may care spirit, with which some of the chauffeurs in the employ of the city disregard speed laws and traffic regulations, has been the cause of many accidents that have cost the taxpayers a pretty penny in damage suits, to say nothing of the increased expense because of the wear and tear on the cars. Yet the disregard for the public safety and the contempt for the authority vested in the traffic police is daily exhibited by the city owned automobiles speeding through the streets, claiming the right of way over all things moving, whether vehicles or pedestrians.

When the municipally owned car, in which the official was a passenger, was halted by the policeman, he at once claimed special privilege and asserted that he was on "city business." The plea had no weight with the officer, nor yet with the magistrate on the following morning when the chauffeur was arraigned, charged with driving at the rate of 27 miles an hour. He was held for Special Sessions in $100 bail.

The city chauffeur, whose series of articles on "Motor Cars as Mediums for Municipal Graft" appeared in the columns of the Motor World not long since, made some interesting statements in connection with this subject when interviewed after the aforementioned arrest.

"While I don't know the details of this special case," he said, "I do know that in my own experience it was seldom that I exceeded the speed limit unless ordered specifically to do so. When I say I did not exceed it, I mean that I did not drive at a speed of over 12 or 15 miles an hour, for, though this is somewhat faster than the law allows, it is by no means reckless driving, and I have yet to see the policeman who considered this rate a violation of the law sufficient to justify an arrest. But it was seldom indeed—unless the night was dark and the company congenial—that my superior did not call for faster and faster speed, and despite my protests, insist on the car being driven anywhere between 20 to 30 miles an hour, even in the busy thoroughfares. I used to protest that I would be arrested. 'Never mind,' he would answer, 'if you're arrested I'll get you out, and maybe he would have done so. I have never doubted but that he'll pay any fine that may be imposed, yet the payment of the fine is not the only thing.

"I don't want the notoriety; I don't want my name in the daily papers; but most of all, I don't want the police department's record of chauffeurs to show against my name or registration number a statement of arrest for speeding. Once arrested and that record will be kept for future reference, and a law abiding individual who may sometimes forget for the moment that he is going too fast, and become a prisoner, will have to suffer, not alone for this, which is really his first offense, but for the other times when he was compelled to speed, by his superior, against his wishes, his judgment and his outspoken protests.

"Last September I read a copy of a letter sent out by the police commissioner to the different department heads, requesting that they keep the speed of their automobiles within the legal limit. I knew that at the time of sending out this letter, the police commissioner sent also an order to his department to make no exceptions in the matter of city machines, but to treat every one, official or private citizen, in the same way; that night I was ordered to 'hit it up' as usual, so I told the inspector of the letter and order, he replied that he had read the former and was not interested in the latter; go ahead.'

"I opened the throttle and let her go. While speeding along I passed one or two policemen who, seeing the department sign on the car, merely turned away, not 'seeing' how fast I was going. Later that night, when I was alone, I met one of the officers whom I knew and asked him why I had not been held up.

"'Well, I'll tell you,' he said. 'The fellow that got your boss his job has got a pull; your boss has got a pull, and if he gets down on me then both of them will use that pull to get me transferred, or something equally disagreeable. Now all of us policemen look at it, that the easiest way is the best way, and we don't see you; that's better than taking chances of getting in trouble. But there's one bad feature in this, too, for if the sergeant sees us let you get past, it means a complaint, but between you and me, I'd rather take a complaint and fine at headquarters than take chances of getting the fellows with a pull after me.'

"And there's the whole thing in a nutshell, the police officers fear results if they antagonize office holders and so they wink at violations of the law when executives with a pull are concerned.

"I might state, in conclusion, that the only city automobiles which are justified in exceeding the speed rules are those of the fire department, and occasionally those of the police department, and to the credit of the latter it must be said that it is seldom one sees a speeding automobile with the letters P. D., N. Y. displayed, unless the machine is being used for the purpose of overtaking some one whom the police desire to apprehend."

New Features of Bay State Law.

Among the several novel provisions of the new Massachusetts automobile law, which will become effective on Sunday next, 12th inst., are one or two which are sufficiently noteworthy to bear comment despite the fact that they were reviewed at the time of the enactment. One of them permits the highway commissions to collect a fee of $2 in addition to the cost of the license for the examination of an applicant. This provision will bear hardest on professional chauffeurs, as they are conpelled to pass an examination in order to secure a license.

Another change from the old law provides that "Wherever on any bridge or way, public or private, there is not an unobstructed view of the road for at least 100 yards, the driver of every vehicle shall keep his vehicle on the right of the middle of the traveled part of the bridge or way, whenever it is safe and practicable so to do." The penalty is a fine of $20 and liability in an action commenced within 12 months of the violation."

Canada Prefers American Cars.

That Canada looks to the "States" for its chief source of motor car supply, despite the enterprise of various Canadian manufacturers and foreign car importers enjoying preferential duties, is evidenced by the registrations in the various provinces. Figures for the period between January first and June first in the province of Ontario are illustrative. Of the total of 205 cars registered in the period, 125 were of American manufacture, not counting fifteen cars the names of which were not supplied, but which were obviously not all non-American.

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SCAVENGING WITH THE EXHAUST

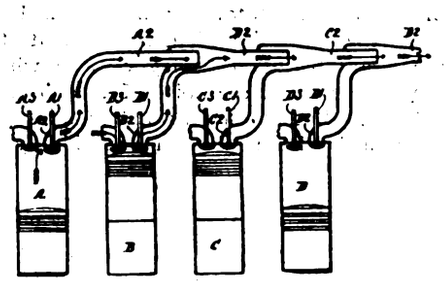
New and Simple System Adapting the Ejector Principle—Applicable to Either Two or Four Cycle Motors.

Considering the existing universal recognition of the need of effective scavenging of the cylinder of the gas engine, it is somewhat surprising that inventors are not more ready to develop methods of improving the performance of their products by establishing systems of this nature. Of the methods of scavenging which have thus far been proposed, nearly all depend upon an undue amount of mechanical complication. A system has recently been designed in England, however, in which no such complication exists, the clearing of the cylinders of a multi-cylinder motor being effected by the simple expedient of utilizing the exhaust pressure from one cylinder, to clear another by a simple adaptation of the ejector principle.

The system in question is the invention of Messrs. D. Stewart & Co., Ltd., and K. J. McMullen, of London Road Iron Works, Glasgow, N. B. As will be seen from the illustration, the exhaust manifold is so contrived that each exhaust is discharged through a jet, into a relatively small chamber in such a way as to establish the desired ejector effect, while the valve mechanism is similar to that of the ordinary motor except for one important particular, which is to say, the use of a plain, air valve, mechanically operated, and designed to relieve the vacuum created by the ejectors, by admitting air into and through the cylinders. The system, it is to be observed, is applicable to motors of either the two or four-cycle types.

The cycle of action is as follows: As shown in the illustration, cylinder, A, is at the beginning of its exhaust stroke the exhaust valve, A1, being open to permit the discharge of the products of combustion into the "ejector-inductor," A2. Simultaneously, cylinder B, is nearing the end of its stroke, and the effect of the discharge from the nozzle A2 is to create a sharp draught through B, pure air for the purpose, being supplied by the valve, B3, and the discharge occurring through the regular exhaust valve of that cylinder, B1. During the progress of this action, the explosion stroke is just commencing in cylinder, C, and the suction stroke has just been completed in cylinder D. A similar scavenging effect is secured in each of the other cylinders in proper rotation and by the same means.

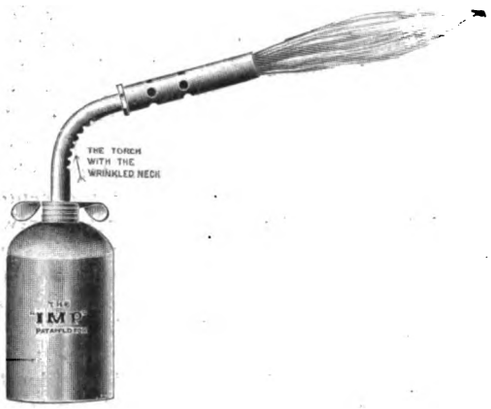
It will be seen that this system contemplates no alteration of the ordinary working of the motor, whether of the two or four cycle type, the only alterations involved in its use being the insertion of the extra, pure air valve in the cylinder head, and the adoption of the nozzle construction of the exhaust manifold. The cleaning action is induced in each of the cylinders just at the termination of the exhaust stroke, and merely serves to assist the discharge of the spent products of combustion, which thus are replaced with pure air. In consequence, the cylinders are cooled appreciably, the strength of the new charge is sensibly increased by the elimination of the foul remnants of the old charge, and the succeeding impulse obtained is in proportionately cleaner and more rapid action. Although it is not generally recognized, it is true that a successful scavenging cycle, were it attainable without undue mechanical complication, would vastly improve the performance of the average motor.



Blow Torch Minus Pump and Valve.

Both for the road and the shop a good blow torch is frequently an indispensable tool, and many efforts have been made to produce a torch that was at once light and compact, while being simple and efficient. Of these the latest is the "Imp," which has recently been brought out by the Frank Mossberg Co., of Attleboro, Mass.

The device is entirely automatic in its action, having no pumps or valves which must be manipulated for its proper operation. A series of corrugations or "wrinkles" in the neck, as shown in the illustration, increases the heating surface to such an extent that the flame of a match easily generates enough gas to start the torch, after which the peculiar design of the mixing tube makes further attention unnecessary. With four ounces of gasolene the "Imp" will give a powerful, steady, clean blue Bunsen flame for over two hours. The value of such a flame in certain classes of repair work cannot well be over-estimated.



PROBLEMS OE THE GAS TURBINE

Difficulties They Present and Results of Efforts to Meet Them—Dugald Clerk Reviews the Progress Made.

In connection with the rapid commercialization of the steam turbine in the installation of large power plants, the old question as to the possibility of arriving at a proper solution of the problems attending the development of the gas turbine of the internal combustion type is constantly arising. It is only two or three years since Dugald Clerk, the eminent British gas engine expert, declared that from the present standpoint, the gas turbine must be regarded as a practical impossibility. That some of these difficulties are being overcome, and the practicability of this type of motor growing in prospect, is almost a certain consequence of the great amount of energy which is being devoted to it.

The two chief difficulties which have beset the path of the gas turbine designer hitherto are those arising from the exceedingly high temperatures engendered by burning the gas under compression, and the high speeds necessary between the moving elements in order to secure a proper working efficiency when the gases are being cooled by expansion. In fact these two obstacles alone, are by many engineers considered sufficient in themselves to block the ultimate development of the gas turbine to a point of commercial utility. "The inventor is thus between two horns of a dilemma," says the Electrical Review, in this connection.

"If by expansion he cools his gases to a point where they can be applied satisfactorily for driving the moving parts, they attain speeds far too high for efficient utilization; if, on the other hand, he seeks to reduce the speed by successive expansions of the gases, he obtains in the first stages of this process temperatures too high. One solution of this problem is to lower the temperature of the gases by mixing with them other cooler gases, thus securing a stream of working fluid of greater mass, but lower temperature. In this way both the excessively high temperatures and excessively high velocities may be avoided, but, of course, with a sacrifice in efficiency as stated by the laws of thermo-dynamics.

"One who had aided much in the experimental development of the gas department was M. R. Armengaud, who, before his death, had constructed turbines of this type with outputs up to 300 horsepower. In these the principle just alluded to, of admitting cooler gases to the products of combustion, was utilized. Since his death the work has been carried on by Mr. Alfred Barbezat. The difficulty of finding a material to resist the high temperature reached in the combustion chamber and

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the erosive action of the hot gases in their passage through the expanding nozzle has been met partially by the use of carborundum. The chamber and the nozzle are lined with this material, and it is backed with a soft packing of asbestos to allow for expansion. When the turbine is in operation this lining becomes sufficiently hot to ignite the fuel as it is forced into the chamber.

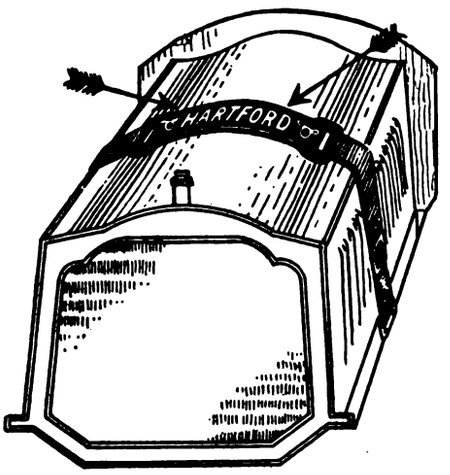
"Another problem met in this work was to secure an efficient supply of compressed air. Since the burning of the fuel in the combustion chamber produces a high pressure, both it and the necessary air must be forced into this chamber against this pressure. When a liquid fuel is employed there is not much difficulty, but it is more troublesome to supply the necessary air, and when an excess of air is used in order to lower the temperature of the issuing gases, additional work is thrown upon the compressor. The compressor now in use is of the multiple turbine type designed by Rateau, it being thought that, since in a turbine the object was to get away from reciprocating mechanisms, the use of a reciprocating air compressor would be absurd, as a complete turbine unit should consist of rotary mechanisms only. . . . .

"The efficiency obtained by the latest machines, which were rated at about 300 horsepower, is said, by Mr. Barbezat, to be not so high as that of reciprocating gas engines. It is to be regretted that he could not give definite figures; but these are promised later. This statement has no reflection upon the gas turbine and merely indicates its present stage of development. Better results may be expected, and some of the losses now taking place will be avoided. It is interesting to note one method at present adopted for this purpose. It has been found necessary to cool, by means of water jackets, the combustion chamber and the expansion nozzle and perhaps other portions of the turbine. The water thus heated is forced into the combustion chamber, where it is converted into steam, with a consequent lowering of the temperature of the driving gases, and thus lightening the work of the air-compressor, which otherwise would be required to supply a much larger volume of air.

"Perhaps one of the greatest drawbacks to this type of prime mover is, what may be called by analogy, its low power-factor. This is due to the necessity for an air compressor which absorbs about half the total power of the turbine proper. That is to say, a gas turbine with an output of 300 horsepower actually develops about 600, 300 of which is necessary to drive the compressor. This 300 horsepower, utilized by the compressor is not, of course, lost. It is merely negative work in the compressor and positive work in the turbine. It represents, as it were, 50 per cent. of the total power of the turbine circulating between it and the compressor, neglecting, of course, losses; and consequently the turbine itself has but half the rating it would have were not this condition present."

Anti-Rattling Device for the Hood.

No one characteristic of the advancement which has been made in automobile development is more pronounced than the elimination of noise. In the not distant past the progress of a motor car was marked by much the same discordant sounds that still are associated with trolley cars to which the former added the noise of an unbridled exhaust. But, so far as automobiles are concerned, the rattle of machinery is



largely disappearing. With many machines, however, the rattling of the hood still is a source of annoyance, which it has been found difficult to overcome. A novel method of overcoming this objectionable noise is found in the Hartford Hood Anti-Rattlers, a simple little device made by the Hartford Rubber Works Co., Hartford, Conn.

This latest comer in the accessory field is nothing more or less than a strip of flexible rubber about a foot in length, a couple of inches in width, and perhaps a quarter of an inch in thickness; adapted to be placed over the hood, and slotted at either end to receive the usual hood strap. When the anti rattler is placed over the center of the hood and the retaining straps drawn tight and buckled firmly, the rubber strip is stretched slightly and through its elasticity, thestraps are kept in constant tension. The hood thus is held in place and with the rubber takingup the vibration, the noise is deadened and wear and tear due to the usual vibration, practically eliminated.

Having a Proper Place for Everything.

Nowhere does the old maxim of "have a place for everything and have everything in its place," better apply than to drivers of automobiles. Tools should be kept by themselves in receptacles that will not permit of their rattling together. Oil cans should be clean on the outside and away from everything else; spare tubes should be so placed that they will suffer no damage from coming in contact with hard substances or grease of any description, and spare parts, such as valves, nuts and cotter pins, should not be thrown together, but kept separately in a small box or drawer in which they may be placed in partitioned spaces, where they readily may be found, and until needed will be safe from injury.

Selecting the Suitable Spark Plug.

In the selection of a suitable spark plug, motorists should bear in mind that the physical construction of the motor plays an important part in relation to the plug's efficiency when in the cylinder. The distance between the explosion chamber and the outside of the cylinder is a factor which has to be considered in the proper selection of a plug, for unless the sparking points are so arranged that they are even with or slightly beyond the pocket so as to project into the cylinder, the spark plug opening forms a recess in which spent gas may accumulate and delay the force of the explosion owing to the fact of the spark occuring at a point where the fresh charge is not in contact with the points. Of course, the greatest care also should be exercised to select a plug no part of which can possibly come in contact with the piston.

Importance of "Lining up" on the Car.

Too much stress cannot be put upon the subject of the importance of a proper "lining up" of the power plant and transmission of a car. If the action or sound of the mechanism denotes that there is something amiss, unless the trouble is located elsewhere it always is well to look to the general alignment of parts. If an owner cannot attend to this matter himself or if his chauffeur cannot, it is advisable to have an inspection made by some one who is competent to make it, and it is far better to lay up a car that is out of line until the evil can be remedied than to continue to use it to the probabble destruction of many of its component parts.

Periodical Inspection of the Underpan.

Cars which are equipped with metallic under-pans for protecting the mechanism should be subjected to rigid, periodical inspection in the parts so concealed and not readily accessible from above. The pan prevents loose and projecting bolts or other parts from being seen, and furthermore, requires the occasional cleaning which this ensures. Incidentally if the pan happens to be loose or broken, the fault will be revealed.

While "racing" the engine just prior to cutting out the spark permits of starting again under compression, thereby saving some slight labor to the driver, the practice is a pernicious one. The wear and tear on various parts of an engine that is being run in this way, at high speed and with no load. is considerable and while the practice is a common one, indulgence in it is not a sign of a cautious driver.

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DISCLAIMS POLICE AUTHORITY

Commissioner Smith of New Jersey Explains His Limitations—Local Authorities Must Police Their Roads.

That the Department of Motor Vehicles of the State of New Jersey is powerless to prevent the speeding of automobiles by doing police duty, is the latest pronouncement of Commissioner J. B. R. Smith. In response to a complaint sent to him by the Freeholders of the Mercer county board, to the effect that the excessive speeding of the machines was damaging the roads of the county, and requesting the department to intervene, the Commissioner responded to this effect, stating that the policing function must be performed by the local authorities.

"I beg to assure you that the department has suppressed and will continue, to the extent of its ability and within the scope of the powers vested in it by law to suppress the abuses attending the uses of motor vehicles," says Commissioner Smith. " Your committee, however, seems to have overlooked the fact that the law places the burden of policing the roads upon the municipal and county authorities. Our State does not undertake to preserve the peace of the different localities except, of course, in those special cases where the aid of the militia becomes necessary; and while the limited number of inspectors (there being only ten paid inspectors for the whole State) appointed under the motor vehicle law are vested with the power to arrest for motor vehicle violation, their duties, primarily, are to advise and to co-operate with the local police establishments and county officers, for the purpose of securing uniformity of action, to investigate complaints of violations of the law made to the department and report their findings for the purpose of determining whether licenses should be revoked; and to investigate with reference to the compliance with the law regarding the carrying of identification marks and certificates.

"Of course it would be absurd to assume that a statute which provides for only ten persons for the whole State vested with the power of arrest, should direct that they should be charged with the entire duty of enforcing the speed regulations pertaining to motor vehicles.

"We are without power, however, even if we desired to do so, to usurp the functions of the county and municipal authorities."

Identification Marks for Jersey Cars.

Identification marks for automobiles registered in New Jersey, to differentiate those carrying unexpired licenses under the old law and those registered under the amended statute, have been provided by J. B. R. Smith, State Motor Vehicle Commissioner. The commissioner says that all cars whose registrations expire before December 31 shall carry the metallic elliptical disc containing the certificate of the department regarding the manufacturer's number affxed to any marker which was legal at the time the amendments to the law became effective. Those whose registrations will expire on December 31 or later shall carry the blue marker with the official seal, containing the manufacturer's number of the car affixed. This course is in keeping with the provisions of the new law and all motor vehicle owners failing to carry one or the other of these official identification marks will be liable to a fine.

Jersey Magistrate Reverses Himself.

Refusing to accept the uncorroborated statements of a lone constable who alleged that Leonard Paulson, of Summit, N. J., had operated a motor car at a speed greater than 20 miles an hour, Justice Woodruff, of New Providence, discharged the defendant after the latter had brought forward, as witnesses, the occupants of the car, who testified that the machine was equipped with a speedometer and that at the time in question the instrument recorded but 15 miles an hour. Incidentally the justice reversed his own decision in the case, rendered at the time of the arrest, when he found the prisoner guilty and imposed a fine. Paulson promptly refused to pay, and demanded a trial, with the above result. He also contended that one man could not properly take any reasonably accurate measurement of the time and this contention was given weight by the justice.

Automobiles for Military Baggage Train.

When the Fifth Regiment, National Guard of New Jersey, goes into camp at Sea Girt on July 25th a new departure will be made in the transportation of the baggage to the encampment. Automobiles will be employed and the camp orders issued announce that the vehicles will leave Paterson, Passaic, Englewood, Hackensack, Leonia and Rutherford at stated times on the morning of July 25. As they will run on schedule time, the baggage must be ready for transportation at the armories when the motor cars arrive. Two enlisted men will be permitted to accompany each company's baggage.

United in the Good Roads Cause.

Teamsters have joined forces with the automobilists in Minneapolis to secure road improvement. The Minneapolis Teamsters' Union and the Minneapolis Automobile Club have decided to go into politics to secure good highways. The plan is to work and vote only for aldermanic candidates who will pledge their aid to the good roads cause. Theodore Wirth, superintendent of the Minneapolis parks, has been elected the first honorary member of the automobile club and it is expected that his official position will enable him to give material aid to the movement.

BAY STATE ROAD EXPERIMENTS

Trying Processes for Making Highways Durable and Dustless — Interesting Work Begun at Cape Cod.

Massachusetts is prolific in experiments in the direction of preserving roads and abating the dust evil. In the city of Marlboro two contracts have been made with concerns making coal tar preparations, one firm applying the tar after heating it and the other applying it while cold. The stone road is first swept, then a thin tar is sprinkled on and brushed into the surface, after which the sweepings are put back to form the wearing surface.

Another experiment is about to be made by the highway commission in the town of Hamilton. Contracts have been awarded for building a dustless stretch of road. It is planned to tear up a stretch of much traveled highway and to build it over again from the bottom to the top. The bottom course will be laid, as in an ordinary macadam road, of stone crushed to the proper size, which will be rolled down hard. On top of this a layer of stone that has been treated with tar will be laid to a depth of two inches. This will be spread and then rolled solid, the top to be sprinkled with a thin layer of tar. It is not planned to build a tar concrete road, but rather a stone road with enough tar to bind the material together and assure a smooth, hard and dustless surface.

Still another experiment is about to be made by the commission on Cape Cod, where there is no stone to speak of, so that the road must be constructed entirely of sand. A heavy grade of Texas crude oil, containing a large percentage of asphalt, will be used with the sand. The sand road will first be shaped with a road machine, and heated oil will be spread over the surface. A second lot of oil will be sprinkled on when the first coat has been on for two weeks. The surface will then be cut up with a disc harrow so as to mix the sand and oil to a depth of four inches. After this has been done the road will be rolled and the surface sprinkled with a thin layer of sand to absorb the surface oil.

A little work of this sort was done under the highway commission's supervision about two years ago, which has resulted so satisfactorily that the State road officials have decided to adopt the plan for roads on Cape Cod, where there is no material with which to construct stone roads. The stretch treated in this manner two years ago has withstood wear better than had been expected and the treatment resulted in a good, firm roadway.

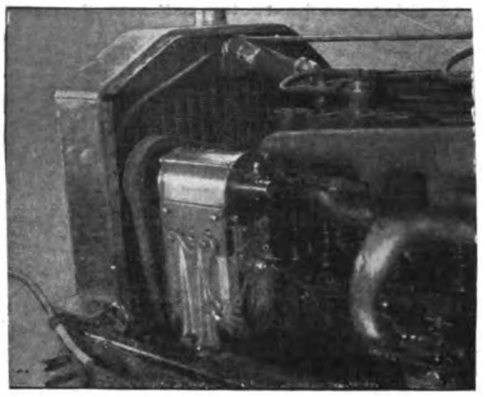
"The A B C of Electricity." Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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New Magneto Adapted to Fords.

Because of the danger of obtaining an injurious combination of windings in magneto and coil, owners who contemplate installing a device of the former type on cars which are not primarily designed for its use, should be extremely cautious about making the investment. In case the windings of the magneto armature and those of the coil are out of proportion to one another—which is perhaps the simplest way of expressing non-technically a condition which is apt to provoke irregular running and expensive upkeep—no little trouble is likely to ensue. In this connection, owners of Ford runabouts who incline to the use of the magneto are provided with an equipment especially designed for the purpose, in the new "Model F," K-W magneto, which the K-W Ignition Co., Cleveland, O., produces along with eight other types of magneto, not to mention several other varieties of ignition specialties.

Not simply is this apparatus designed to "balance" the windings of the coil regularly installed in the Ford cars, so that its performance will be non-injurious to the original equipment, but it also is contrived in such a way mechanically, that it may be readily attached to the frame of the machine, and driven by means of a belt, from



the fly wheel. The bracket upon which it is mounted is regularly furnished with it. A special non-stretchable belt also may be obtained for driving purposes, at a slight advance in the price. The manufacturers guarantee the magneto to start the engine easily without the use of the batteries, and claim in addition, that because of the hot spark which it develops it will run the engine faster and better, and with better fuel economy, than as a general thing, would be possible with the battery equipment alone.

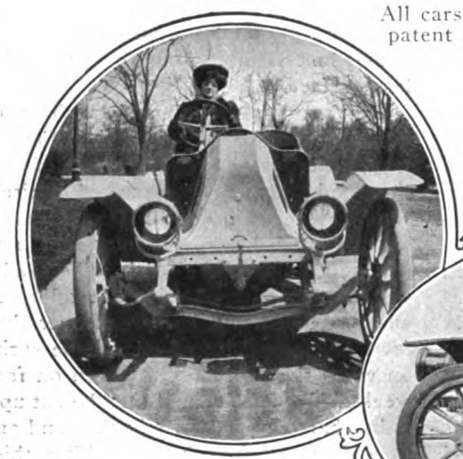
Anti-Scale Compound for Cooling System.

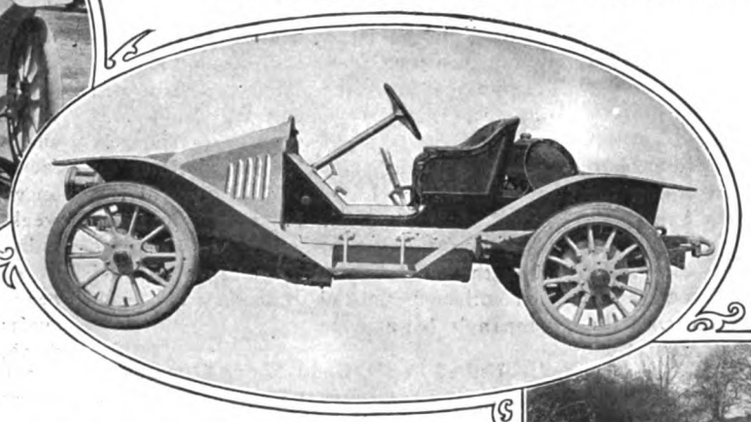
Like boiler compounds for preventing scaling, preparations intended either to prevent or remove deposits of foreign matter and scale from the interior of the cooling system of the automobile are likely to furnish an ample field for the activities of the purveyors of motorist's supplies for some little time to come. Quite the latest of these is a British innovation, known as "Evaporine," which is mingled with the water in certan fixed proportions, and in the course of time tends to remove all incrustations of an injurious nature. Needless to say, the careful motorist will find it a matter of economy to use only pure water in the radiator, in which case, as there is little or no deposit, no such compound is at all necessary.

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28-30 H. P.
4 cylinders
Price, fully equipped,
$1,950

We show here three views of the Palmer-Singer "Skimabout" or Four-Thirty.



Nickel steel throughout. Imported F. & S. ball bearings exclusively. Bosch high tension magnetos and multiple disc clutches in all models. Nickel steel frames. Drop forged I beam, nickel steel front axle—four-speed selective type, sliding gear transmissions with direct drive on third speed. All brakes equalized, all expanding type and on rear wheels. Universal joints on all steering connections. All types shaft-driven, all moving parts inclosed in dustproof cases.

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The Week's Patents.

885,960. Vehicle Wheel Rim. Edwin C. Shaw, Akron, Ohio, assignor to B. F. Goodrich Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 20, 1907. Serial No. 358,463.

1. A vehicle wheel rim comprising a channel iron carrying one permanent tire flange, a removable split ring carrying an opposing tire flange, downwardly extending lugs upon the split ring, near its terminals, slots in said channel-iron adapted to receive the said lugs, a lip or lug extending upwardly from the channel-iron, and a key adapted to pass through said upwardly extending lip and through mutually registering grooves in the contacting surfaces of the ring terminals.

885,986. Transmission Gear for Motor Vehicles. Leonard H. Dyer, New York, N. Y. Filed Jan. 22, 1906. Serial No. 297,116.

1. In a transmission gear for automobiles, the combination of a driving member, a driven member, a driving gear for the former, a plurality of intermediate gears, including a reversing gear, and means, including mechanism shiftable as an entirety, for driving said driven member through any one of said intermediate gears.

886,016. Automobile Radiator. Charles Schmidt, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Nov. 18, 1907. Serial No. 402,637.

1. In an automobile radiator, the combination of an upper tank having outlets through its bottom near its sides, a lower tank having inlets through it top near its sides, side members secured to said two tanks inside of said inlet and outlet openings, rows of horizontal tubes extending between and passing through said side members and secured thereto, return bend plates secured to said side members and covering a plurality of rows of tubes, and cover plates secured to the bottom of the upper tank and to the top of the lower tank outside of said openings therein, and secured at its side edges to said side members.

886,019. Rim for Motor Car Wheels. Don C. Smith and William F. Gorton, Muncie, Ind. Filed Oct. 10, 1906. Serial No. 338,214.

1. The combination with a wheel having a rigidly secured felly rim thereon, of a tire-retaining rim comprising oppositely disposed annular rings having in-turned flanges ta their outer edges, this vertical facing being provided with a rabbeted joint having the seat thereof beveled, the vertical line of jointure of the facing edges of the rings being to one side of a line central between the flanges, there being transverse apertures provided in the rings and having bolts therein whereby the members many be secured togethere, the inner surface of the tire-retaining rim being machined to fit the felly rim, and transverse apertures being provided at intervals at the line of jointure of the tire-retaining rim and the felly rim and having bolts therein whereby the tire-retaining rim, in assembled form, may be secured to the wheel, substantially as described.

886,098, Motor Vehicle. William W. Wainwright, Connersville, Ind. Filed Mar. 7, 1907. Serial No. 361,089.

1. In a motor vehicle, the combination of a hollow steering axle structure, a pair of live shafts mounted in said structure and connected at their inner ends by a compensating gear also mounted within the structure, a driving pinion structure journaled within the hollow axle-structure and meshing with the compensating gear, a frame yoke pivotally mounted exteriorly upon the axle-structure on an axis at right angles to the axis of the axle-structure, a driving shaft journaled in said yoke, a pinion meshing with the driving pinion structure, the axle structure having a substantially horizontal opening permitting the engagement of the driving shaft pinion with the driving pinion structure, and means for swinging said axle structure in the yoke upon the pivotal connection therebetween.

886,103. Hydrocarbon Burner. Rollin H. White, Cleveland, Ohio, assignor to The White Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 24, 1903. Serial No. 144,557.

1. The combination of a main burner having a mixing tube, a casing above the main burner and inclosing the combustion chamber, a sub-burner which extends up through the main burner, a vaporizer removably supported within said combustion chamber and extending over the sub-burner and over a part of the main burner, and a support for said vaporizer within the combustion chamber, with a feed pipe, a valve casing secured to said feed pipe, a vaporizer feed pipe which extends through a hole in the wall of the combustion chamber and separably connects the vaporizer with said valve casing, a valveless pipe connected with the discharge end of the vaporizer and extended out through the same hole in the wall of the combustion chamber and terminating in a nozzle which discharges into said mixing tube, and an independent feed pipe for said sub-burner, substantially as specified.

886,191. Variable Speed Power Transmission Device. David M. Dearing, Jackson, Mich. Filed Feb. 15, 1906, Serial No. 301,282. Renewed April 1, 1907. Serial No. 365,856.

1. A transmission gearing, including a driving shaft, a driven shaft arranged at substantially right angles to the driving shaft, a beveled frictional wheel having a bevel pinion fixed to the driven shaft, and a beveled friction wheel having a bevel pinion fixed to the driving shaft adapted to successively engage with the wheel and pinion carried by the driven shaft.

886,225. Current Distributing Device for Igniting Explosive Engines. Henri de la Valette, Paris, France. Filed May 8, 1906. Serial No. 315,769.

1. A high tension current distributing device, comprising a plate of insulating material, a lid of insulating material on the plate, a revolving disc of insulating material located between the plate and the lid, contact pieces arranged in a circle in the plate, a contact ring located in the lid, and a brush located within the revolving disc, adapted to ride on one side on the said contact pieces and on the other side on the said contact ring.

886,265. Rapid Fire Carburetter. James A. Speed, Los Angeles, Cal., assignor to Speed Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed April 25, 1907. Serial No. 370,324.

1. In a carburetter, a strangling tube, means for spraying gasolene into the strangling tube comprising a nozzle in the tube, a valve at the upper end of the nozzle, an upper stem on said valve, a lower stem on said valve projecting into said nozzle, a guide in the nozzle in which the lower stem slides, means for admitting air to the strangling tube to combine with the spray of gasolene, auxiliary means for admitting a fur-

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ther supply of air to the mixture after it has left the strangling tube, and mechanism having an engagement with said upper valve stem and with said auxiliary means for simultaneously operating the auxiliary means and valve.

886,353. Air Pump. Orris J. Darling, Detroit, Mich. Filed April 8, 1907. Serial No. 367,133.

1. In an air pump, a cylinder open at its lower end and provided with means to fit over an opening, a double acting piston, a hollow rod to said piston, a check valve in said rod, and means on the rod controling the introduction of air thereunto, substantially as shown and described.

886,429. Vehicle Spring. Frederick R. Skidmore, Milwaukee, Wis. Filed Feb. 10, 1906. Serial No. 300,415.

1. A vehicle spring comprising bell cranks in pivotal connection with the vehicle, an axle carried by one pair of the bell crank arms, and a pair of air controlled pistons in independent opposition to each of the other pair of bell crank arms in opposite directions.

886,501. Shock Absorber. George L. Harvey, Chicago, Ill., assignor to Harvey Friction Spring Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1905. Serial No. 289,993.

1. A shock absorber comprising a spring loop having its ends respectively in operative relation to the relatively movable members, and a non-rotative co-operating member embraced by said loop and in frictional contact therewith.

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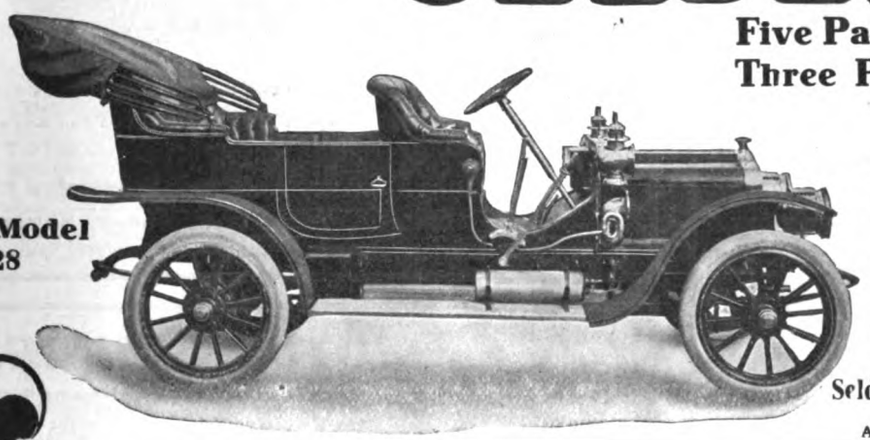
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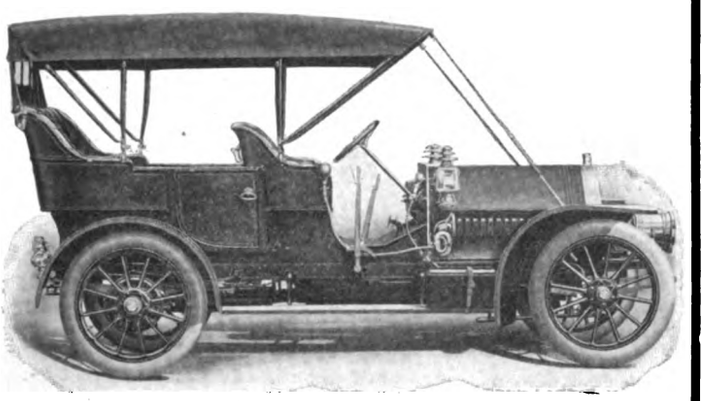
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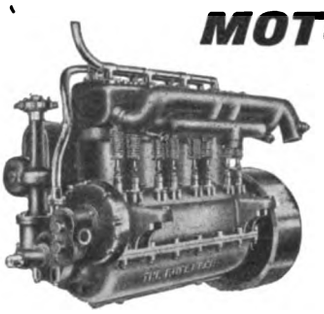
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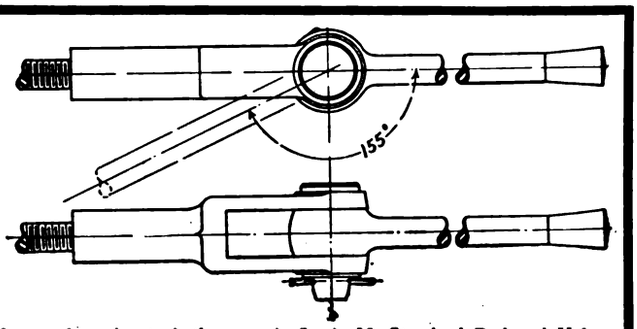
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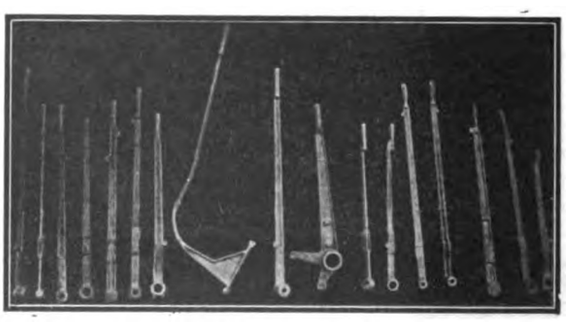
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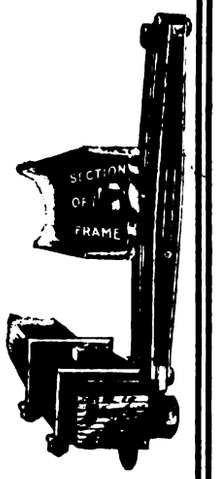
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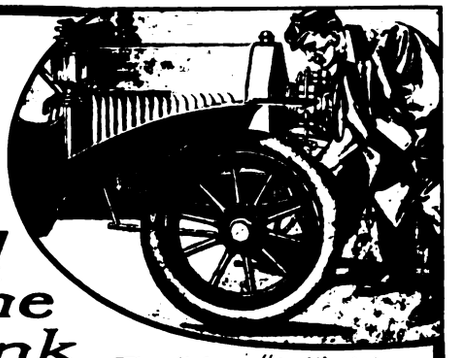
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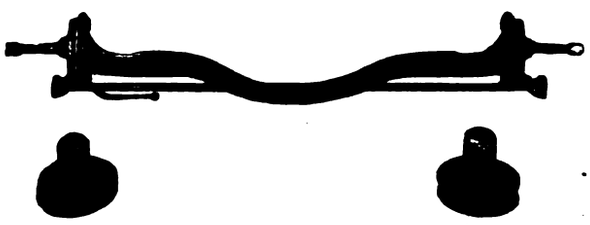


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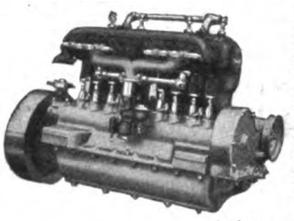
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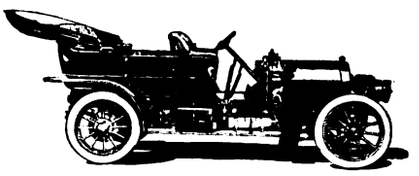
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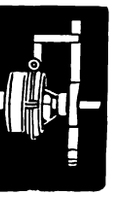
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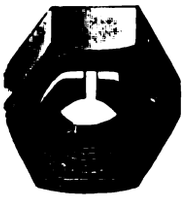
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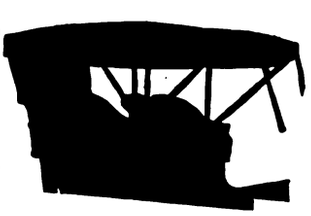
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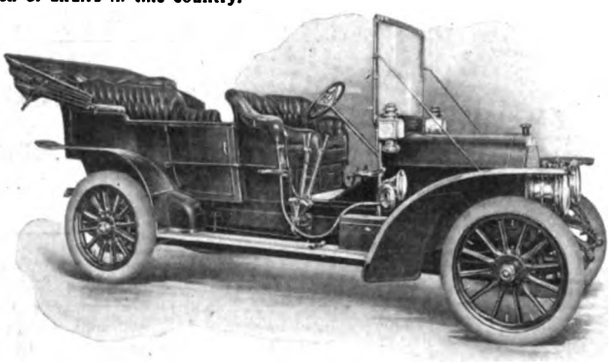
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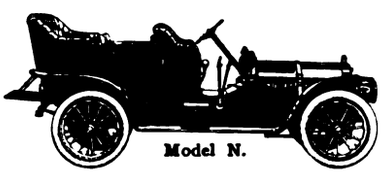
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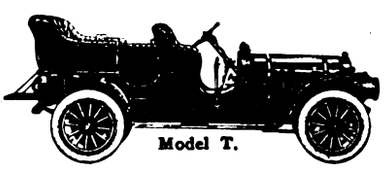
Model K 4 cyl., 4⅞ x 5
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All Nationals have two complete systems of ignition.

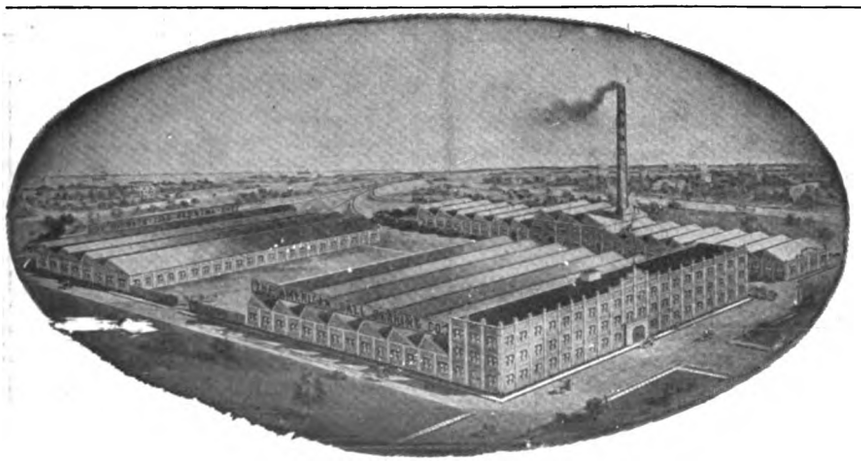
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In bringing out this new model we do not in any way retract any claims that we have made for the six-cylinder car which we are firmly convinced is the highest type of automobile construction. In response to a demand for a larger and roomier car than our twenty horsepower four-cylinder Model R, and more moderate in price than our Light Six, we have produced the Model X. This model supplies a demand for a four-cylinder car a little larger and more powerful than the Model R, which has been discontinued. The owner of the Model X can feel that the well-known features of the Model R are embodied in his car, together with the advantages of more room and power. In brief, the Model X is an enlargement and refinement of the Model R, representing the most advanced ideas in automobile designs, together with Stevens-Duryea construction and workmanship, which have been proven absolutely correct.

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This construction, which has made the name "Stevens-Duryea" synonymous with motor car efficiency, is retained. Stevens-Duryea cars were built on correct principles in the beginning, and at no time have any radical changes been made in their design.

4¾-INCH BORE. TIRES, 34 x 4 INCHES.
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The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMPTON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller ..... $1.00 per foot.
1 x ⅝ x ⅝ roller ..... 1.17 "
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You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

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"THE TIRES OF STERLING QUALITY"

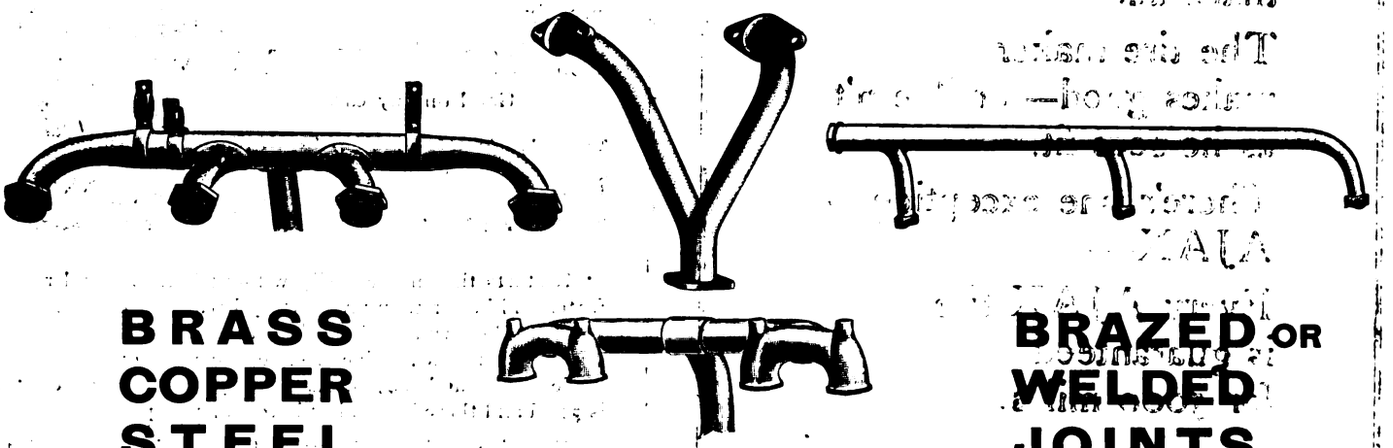
makes them cost a great deal more to build than any other tire, but it makes them the most economical tires for the user.

Every part of the Firestone Tire is made of the very best material for its purpose—by the most expert workmen—and in the most improved manner known to the tire building science.

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BRASS
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no matter how
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the promises of
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If the tire
goes bad
you have the privilege
of carrying on
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with the factory—
that's all.

The tire maker
makes good—or doesn't
as he sees fit.

There's one exception—
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Every AJAX tire
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ON AND GONE IN LESS THAN A MINUTE



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Model F

Has bracket as shown for attaching to frame of car. Made especially



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Good on any car.

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It starts the engine easily without batteries and runs it faster and better than any battery because it gives a hotter spark. They run in ball bearings and have no moving wires or brushes to give trouble and wear out. They are made to last and they do last. They are the cheapest that is good and there is nothing better at any price.

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The "Maxwell"

Challenges the Glidden Tour Winner for an Endurance Run from New York to San Francisco

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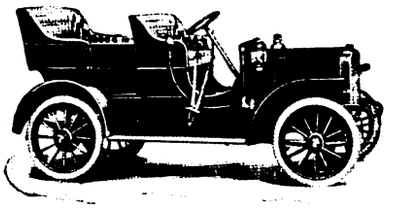
BECAUSE they gave a chance to show publicly that Maxwell cars are superior in many ways to high-priced automobiles.

INFLUENCED by a spirit of trade jealousy of the Maxwell and its many triumphs over them, the Glidden-Tour Rules have been so modified as to let the high-priced cars down easy if they lose.

HOW RIDICULOUS to expect us to enter a contest in which the losing high-priced car can minimize or excuse defeat by pointing to a schedule which made its running time 30 to 45 minutes faster a day.

IT IS

Not an experiment
Not an assembled car
Not a slavish copy of foreign design



BUT

A genuine American
For American roads and American touring conditions

The Maxwell Challenger—Model D, 4-Cylinder—24-30 H. P.—Price $1750

Three-point suspension, multiple-disc clutch, unit construction, thermo-syphon cooling are original in the Maxwell
All others who use them pay the Maxwell the sincere compliment of imitation.

10,116 MAXWELL OWNERS testify that they have as good a car at $825, $1450, or $1750 as they would possess had they paid at least twice the Maxwell's price.

WE ARE WILLING TO PROVE IT hence we challenge the winner of the Glidden Tour to an endurance run from New York to San Francisco, under Glidden Tour Rules of 1907, which put us on equal terms with the highest-priced and most powerful touring cars made. Winner to dispose of $5000 purse.

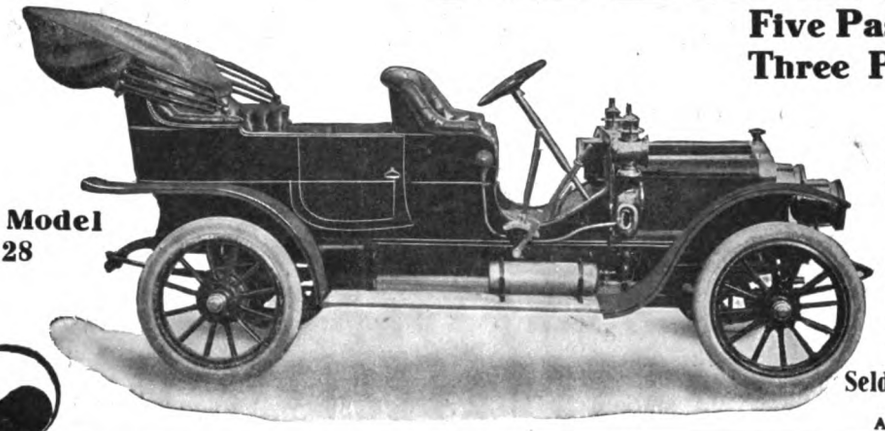
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Five Passenger Touring Car $2000
Three Passenger Runabout $2000

F. O. B. FACTORY

4 Cylinders, 30 H. P., 109" wheel base, metal body, pressed steel frame, beveled gear drive, three speeds selective.

A great hill climber, smooth running, ample power, light weight, well-made, fine finish and already known as the "Silent Selden" because it runs so noiselessly.

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is not only the **World's Best Car,** but one of its oldest and most famous. It gives prestige to both owners and agents.

Model M	Model MR	Model Z
Touring Car, Fully Equipped,	"Flying Roadster," Fully Equipped,	6-Cylinder, 130-inch Wheel Base,
$2,750	$2,750	$4,200

OLDS MOTOR WORKS, Lansing, Mich., U. S. A.
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Canadian Trade supplied from Oldsmobile Co. of Canada, Toronto, Ontario.

TRENTON RUBBER MANUFACTURING COMPANY'S

THERMOID Brake Lining

WILL BE ON MOST CARS IN 1909—WHY? ASK THOSE WHO HAVE TESTED IT



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Whether or not you are warned by signal that you are approaching a drain or gully—be warned that

WEED CHAINS

are necessary when you are negotiating in mud or sand—and on wet, slippery streets. They grip and hold the wheels to the road. They positively prevent skidding or slipping on greasy and wet pavements. They preserve tires and enable the heaviest automobile to climb hills easily. They prevent lost traction and reduce gasolene consumption.

Fit any standard tires; are readily attached and detached.
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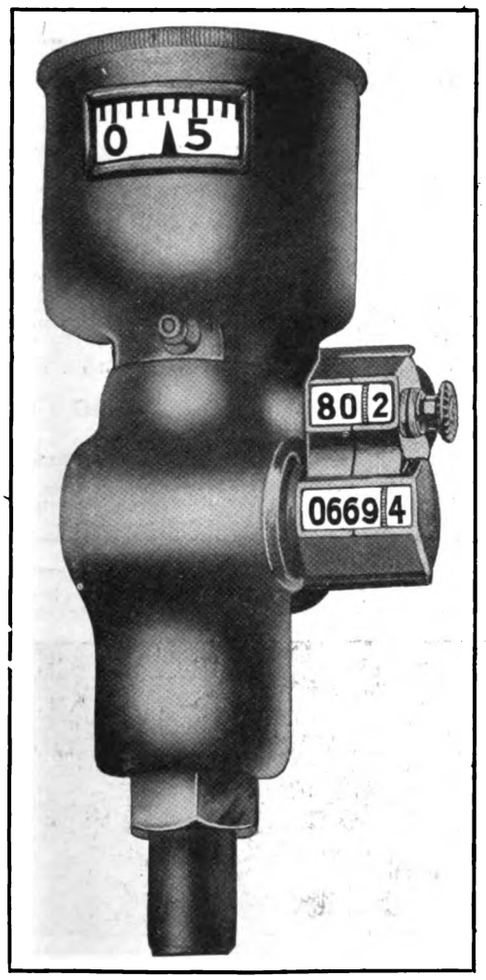
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It was a walk-over. The men who put their best efforts into making cars for this big event knew what speed indicator to buy—for every Warner used in this event was purchased and we can show the official order.

This big Warner percentage is a mighty potent fact. The 1908 Glidden Tour was a manufacturers' battle-ground—a struggle for blood. Every firm put out its best product and its best driver. None but the best of accessories were considered for a moment. Not a detail was overlooked that could in the least contribute to the possible winning of the famous trophy. No manufacturer who is out to make a record—amid company he dare not think of despising—would make the fatal mistake of using an accessory that is liable to fall down on him. He will scrutinize. He will investigate. He will rigidly try out everything that goes to make up his equipment. Naturally he is going to use that which proves to be the best.



A Warner Walk-over

57 Entrants
36 of them Warner-equipped
63 PER CENT. OF THE WHOLE

When manufacturers will turn down instruments that have been offered to them as gifts and pay out their good coin for Warner Auto-Meters, there must be something in it when we say that we make the only speed indicator on earth. This proves the supremacy of the Magnetic Principle—for manufacturers are discerning men.

That which is good enough for the Glidden Tour entrants is surely good enough for you.

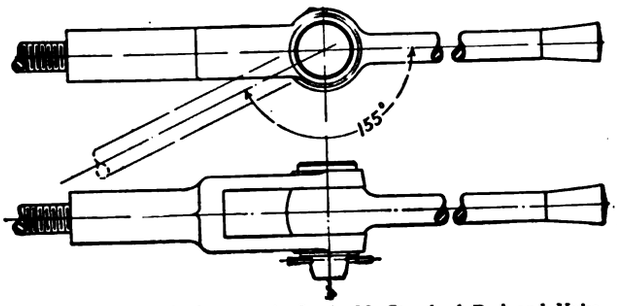
And you don't have to pay out one cent to try one of them, either. We'll put an Auto-Meter on any car on earth for a 30 day trial—no deposit—no agreement. Nothing but your promise to give the Auto-Meter a fair trial.

Write us to-day and ask us to send you one. Just tell us the make, year and model of your car with size of wheels and tires. You'll get one by express prepaid. If it doesn't suit you, return it at our expense. There will be no argument.

Warner Instrument Co., 217 Wheeler Ave., Beloit, Wisconsin

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A. L. A. M.



We now have in stock the new A. L. A. M. Standard Rod and Yoke Ends, both the adjustable and plain patterns, either blanks or milled. Send for new circular with full particulars.

THE BILLINGS & SPENCER CO., Hartford, Conn.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG—DURABLE
SCALELESS—RUSTLESS
SMOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

"RAJAH" SPARK PLUGS

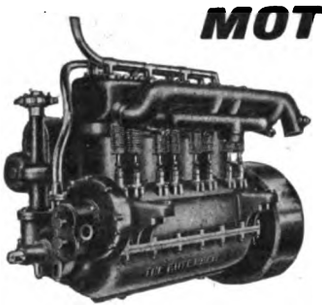
IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

BLOOMFIELD, NEW JERSEY, U. S. A.

(Watsessing Station, D., L. & W. R. R.)

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



"Nothing Finer the World Over."

Hotel Pontchartrain

Cadillac Sq., Cor Woodward Ave.
DETROIT, MICH.

Absolutely Fireproof.

Combines more up-to-date features than any other hotel in the country. Appeals particularly to tourists and travelers.

Conducted on European Plan. Unsurpassed Cuisine—Excellent Service.

RATES: $2 Per Day and Upwards.

PONTCHARTRAIN HOTEL CO., Props.

GEORGE H. WOOLEY, W. J. CHITTENDEN, JR., } Managers.



Supplementary Spiral Springs

Provide SPRING INSURANCE and SPRING COMFORT.

Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

Let us send you our interesting booklet, and ask your dealer about them.

SUPPLEMENTARY SPIRAL SPRING CO.,
4555 Delmar Avenue, St. Louis, Mo.

New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.

Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

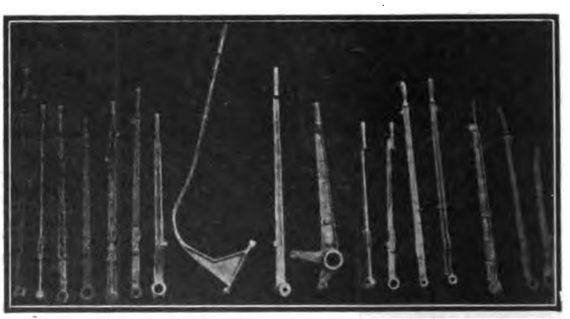
MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF.

Samples and Prices on Request.

THE PACKARD ELECTRIC CO., - Warren, Ohio

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Sole Makers

THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.

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You *Can* Afford the $2000 Mitchell

—Afford to *buy* it because it is moderate in price.

We know you can afford to *keep* it, because we have many letters from users of Mitchell, testifying from actual daily experience, that it is the most economical car to *operate*. Before *you* buy a car, send for these letters and try a Mitchell in a 50 or 100-mile road test.

In demonstration, you'll notice not only that its style, finish and construction is equal to that of the extravagantly high priced cars, but that its *performance is too.*

Proof is easy, Mr. Business Man.

The Mitchell Agent will be glad to take you out at any time you say. Just call him up—no obligation on your part.

Try the $2000 Touring Car—the $2800 Limousine—the $1250 Roadster or the $1000 Runabout.

Get demonstrations of high priced cars and compare the Mitchell with them.

Call up the Mitchell Agent today and just say



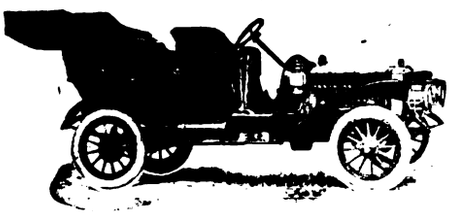
"Show Me"

The Mitchell Touring Car shown below is 35 H. P.—4-cylinder—speed, 50 miles—finish, Mitchell blue—price, $2000.

Write for Catalogue No. 18, describing the other Mitchell models.

Mitchell Motor Car Co., 284 Mitchell Street, Racine, Wis.

Standard Manufacturers, A. C. M. A.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Write for White Bulletin No. 15

The above illustration is reproduced from the new White Bulletin No. 15, an attractive little booklet devoted to some of the more important automobile events of the last few months. The leading articles are "The New Road Record Between San Francisco and Los Angeles," "The Fort George Hill Climb," "The Quaker City Reliability Contest" and "The Harrisburg Reliability Contest." In addition to these four detailed accounts of White victories, brief space is given to the numerous minor contests in which the White has carried off first honors; also, the activities of private owners of White cars and the doings of "Government White Steamers" in this and other countries receive attention. We believe that you will find this booklet of interest.

A POSTAL TO US BRINGS A COPY

THE WHITE COMPANY

CLEVELAND, OHIO

PITTSBURG, 138-48 Beatty St. ATLANTA, 120-122 Marietta St.
SAN FRANCISCO, 1460 Market St. CLEVELAND, 407 Rockwell Ave.
NEW YORK CITY, Broadway at 62d St. BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St. CHICAGO, 240 Michigan Ave.

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SOLARCLIPSE
LAMPS

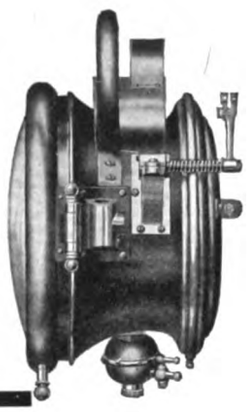
TWO DISTINCT FIELDS OF LIGHT

The last and final move forward toward perfecting a lamp for automobile use—the

SOLARCLIPSE

scientifically solves the lighting problem. These lamps illuminate the road with two distinct fields of light; one long and one short distance ray.

The Automatic Self-Eclipsing mechanism which operates from the dash through means of a lever makes it possible to cut out the long distance ray at will. The long distance ray projected by Solarclipse Lamps penetrates the darkness for one thousand feet ahead. The short distance ray is thrown directly in front of the car.



Complete description of the Solarclipse Lamp and Besnard System of Lighting in our 1908 catalogue. Sent free upon request.

BADGER BRASS MFG. COMPANY
606 Lyman Avenue, KENOSHA, WIS

THE BEST BATTERY IS THE WITHERBEE

It is used and recommended by practically all the leading manufacturers and dealers. This fact in itself is an acknowledgment that there is no better storage battery to be had. From the standpoint of material, design and workmanship—it is impossible to construct a better battery. On any car the Witherbee means perfect, efficient ignition, reliable at all times, under any conditions.

If desired Agents and Branches of this Company will fulfill any requirements of manufacturers, dealers and owners

Wico Inspection Lamp, Wico Charging Device, Wico Ring and Roller Timer, Volta Magneto, Witherbee Batteries, Wico Ignition Wire

WITHERBEE IGNITER CO.

Makers of the famous Witherbee Battery

1876 Broadway, NEW YORK

CHICAGO
1429 Michigan Ave.

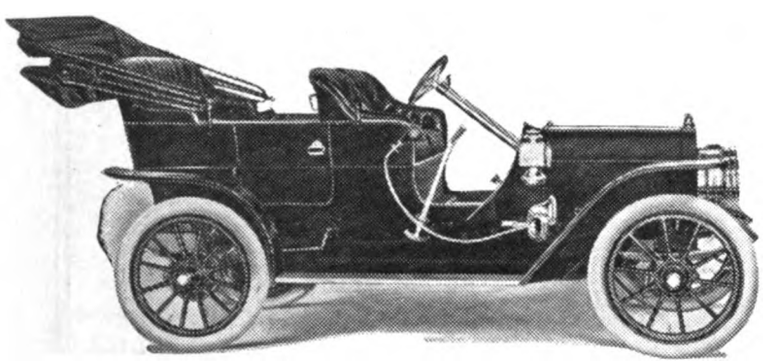
DETROIT
220 Jefferson Ave.

BUFFALO
720 Main St.

BALTIMORE OFFICE:
604 Continental Trust Bldg.



OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

The Mercedes Wins Grand Prix with

BOSCH



MAGNETO

Lautenschlager, driving a Mercedes, won the 1908 Grand Prix. Time, 6 hours 55 minutes and 43 seconds. Average speed 69.24 miles the hour. The first eight cars to cross the line were equipped with Bosch Magnetos.

EVERY GRAND PRIX RACE HAS BEEN WON WITH THE BOSCH SYSTEM OF IGNITION

In the Prince Henry Contest (Germany), the first ten winning cars were equipped with Bosch Magnetos.

In the New York to Paris Race the Thomas Flyer, America's representative and leader, as well as the other two contestants, are equipped with Bosch Magnetos.

Place your order now for 1909 and be assured of prompt delivery. The Bosch Magneto is universally recognized as standard and should be on EVERY car.

BOSCH MAGNETO CO., 160 West 56th Street, New York

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It is the uniformly satisfactory manner in which Morgan & Wright Tires stand up under any kind of service, from a Glidden Tour to a trip "downtown" and back, that makes them the ideal equipment for the motorist who uses his car under a variety of conditions.

Here's the way they stood up under one test—a 50-mile race—at Los Angeles, Cal.:

"The Model 'G' Cadillac entered by us in the fifty-mile race at Agricultural Park, on May 30th, was equipped with Morgan & Wright tires, and made a most creditable showing in this race. These tires showed very little wear as a result of their fifty miles hard usage in the race, and after the race were still good for several thousand miles of ordinary service, notwithstanding that they had been used some sixty-seven miles on the car in the try-out. In fact, the remarkably good service they gave was one of the features of the 'race meet,' and, of course, contributed most materially to the success of the car.

"We are also pleased to state that your tires made equally as good a record on the Cadillac in the one hundred-mile race the following day.

"Yours very truly,
"LEE MOTOR CAR CO.,
"D. M. Lee, Mgr."

Every Morgan & Wright Tire has that same ability to give troubleless service, whether it is used in racing, touring or city driving.

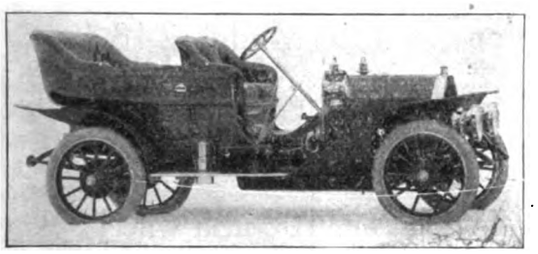
That ability will be at your service if you specify them on your car.

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere

THE REASONS WHY

the manufacturers of high grade automobiles equip their best cars with **Timken Roller Bearings and Axles** are—that the principle on which



BUICK MODEL 5—Winner of Indianapolis Automobile Trade Association Sealed Bonnet Contest. Equipped complete with TIMKEN ROLLER BEARINGS AND AXLES.

TIMKEN ROLLER BEARINGS

are built, is the only one by which the friction loss is reduced to one-quarter of one percent or less—that provides the maximum bearing capacity in a smaller diameter than any other type and that takes up loss through wear without changing its characteristics.

Timken Principle and Timken Quality

are in consequence, the accepted standards of efficiency in anti-friction bearings.

Comparative tests under actual service conditions will prove that a lightly built car equipped with

TIMKEN ROLLER BEARINGS AND AXLES

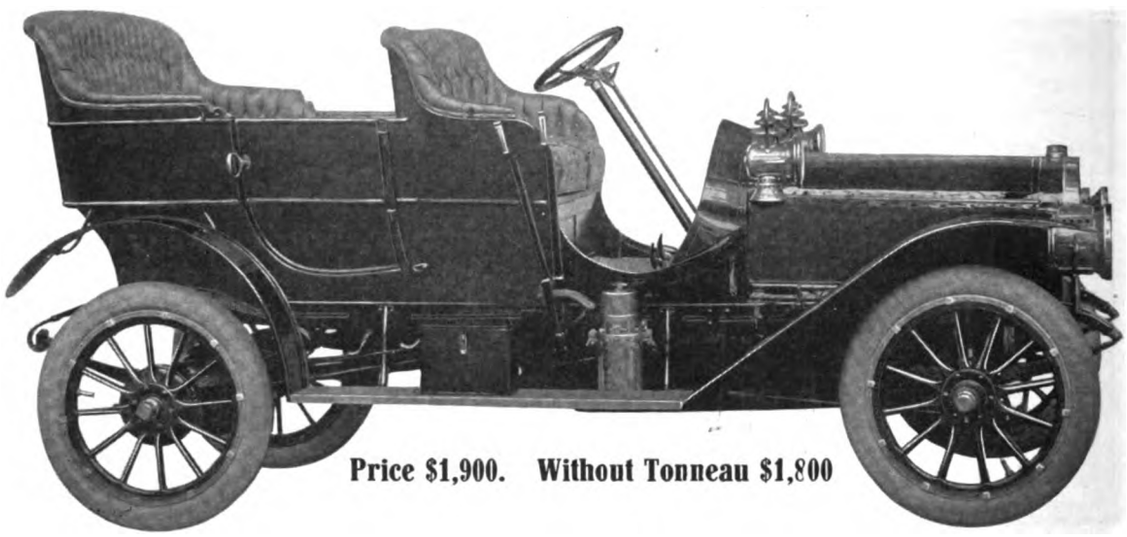
has greater endurance and stress resisting qualities than mere weight and strength of metal can give it. Descriptive literature and special information gladly supplied.

The Timken Roller Bearing Axle Company, Canton, Ohio

Branches: 10 East 31st Street, New York 429 Wabash Avenue, Chicago

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Rambler
Model 248



Price $1,900. Without Tonneau $1,800

DEALERS!

An Unusual Car at an Unusual Price

Write today for our special proposition on this Model 248.

Four cylinders, full 30 horsepower, Timken roller bearing transmission, transmission gears made of special steel, floating type rear axle, full elliptic rear springs.

It's a complete five-passsenger touring car with tonneau, 108-inch wheel base, 34-inch wheels and 4-inch tires. Quiet, powerful, flexible, handsome. You cannot buy another car of such size, power, efficiency, reliability, appearance and comfort for anywhere near the same price.

Do you care to know more about Model 248?

Please write for full particulars to-day! Or send us a postal, giving your name and address, and we will send the facts at once.

THOMAS B. JEFFERY & COMPANY, Main Office and Factory, **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, July 16, 1908. No. 16

STUDEBAKER PLANS BUGGY TYPE

High Wheel Motor Vehicles to be Built for Farmers' Trade—Chassis Order Has Been Placed.

Having become convinced of the growing demand for the buggyabout type of automobile, the Studebaker interests of South Bend, Ind., have set in motion a part of their vast selling machinery to arrange for the marketing of a new production along this line, which is shortly to make its appearance. Arrangements for the manufacture of the vehicles have but recently been completed, but already an order for a large number of the chassis has been placed with the Speed Changing Pulley, of Indianapolis, Ind.

While the order that has already been placed is in a sense only a preliminary, its size may be appreciated when it is known that it was a factor in influencing the removal of the Speed Changing Pulley Co. to Anderson, Ind., this fall, from which town it received ten acres of ground and $75,000 for the erection of a new plant.

That so prominent a concern as the big wagon makers should join the ranks of the builders of the high wheel machine is significant of the growing popularity of this type of vehicle, and is therefore of considerable interest to the trade. The venture into the buggyabout field was only taken after a careful sounding of the market through the agencies of an enormous vehicle business closely in touch with the agricultural communities.

Woods Will Make "Woodsmobiles."

Walter A. Woods has resigned his position as treasurer and general manager of the Cleveland Motor Car Co., to head a new concern with a capitalization of $300,000 and which will be known as the Walter A. Woods Manufacturing Co. Its product will be a car called the "Woodsmobile," which will be made in Milwaukee. The chassis will in many respects resemble the 1908 Cleveland, for which Woods was largely responsible. It will have the Continental motor, four cylinders, 5 by 5 inches, selective transmission with four speeds forward and reverse, an improved multiple disc clutch and a number of detail refinements. The price complete with top, glass front, lamps, and full equipment, has been set at $3,500.

A six story building on "automobile row" in New York City has been engaged for salesroom, garage, stock room and repair shop, which it is expected will be opened about the first of September. Meanwhile the temporary offices are in the Miller building, 1931 Broadway, New York City.

Building Plant at Anderson.

The Speed Changing Pulley Co. has broken ground on a ten acre plot at Anderson, Ind., for a new factory which is to be of iron and brick construction. Work has been started on three large buildings and others will be added as occasion requires. The machine shop, half of which will be two stories high, will be 550 feet long, while the building which will contain the power plant for the foundry and blacksmith shop, and the carburetter manufacturing department, will be 310 feet long and 40 feet wide. The third building will be an office and store room. President E. S. De Tamble says that the new plant will be ready for occupancy about the first of September.

Sheriff Seizes Earl Motor Car.

Seizure by the sheriff of all the visible assets of the Earl Motor Car Co., of Kenosha, Wis., which is said to have made about 100 cars this year, has temporarily put a halt on its activities. The action was taken on a $90 claim filed by the Automatic Screw Co., of Cincinnati. O. The company was promoted by Charles Rohde, of Milwaukee, and a reorganization is now being planned, with capital from Escanaba, Mich., to assist. Thomas H. Booth, of Chicago, who has been actively engaged in the management, has retired but will retain his stock.

HARRIMAN A MOTOR CAR MAKER

Backs Million Dollar Company to Build Gasolene Railway Cars—Utilizes Union Pacific Experience.

E. H. Harriman has launched into the field of "automobile" railway cars and is backing a million dollar company in Omaha to manufacture gasolene cars for railroad and other use. The new company, organized under New Jersey laws, which is to be known as the McKeen Motor Car Co., is built up on the work done experimentally by the Union Pacific Railroad in devising gasolene suburban cars for its lines. W. R. McKeen was the superintendent of motive power and machinery at the time the experiments were undertaken and it is he who will head the separate enterprise as president and general manager, having resigned his place with the Union Pacific. All the patents under which the company will operate and which McKeen took out while employed by the Union Pacific, have been assigned to E. H. Harriman, who will look after the financial end.

Acting under instructions from Harriman, president of the Union Pacific Railroad Co., McKeen two years ago began to experiment with gasolene motors to propel passenger cars. The first car had a 50 horsepower motor and it was soon seen more power was needed. No. 1, with its light engine is still doing business and every car which has been built by the Union Pacific has been a revenue producer. Car No. 2 was then built with a 100 horsepower motor and it did good service, but the cars were crowded so heavily and a trailer was needed for baggage and express that it was decided advisable to put in a 200 horsepower engine. That is the size now in use and being installed in the new cars which are being built. These cars have been sent to all parts of the United States. Their greatest value lies in the small fuel charge and they can be operated with fewer men than a reg-

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ular train, while doing the work of the latter as satisfactorily as steam.

Motor cars are not the only products which will be turned out by the company. A gasolene locomotive for switching purposes around private plants, will also be built. Railroads may no longer switch cars around a private manufacturing plant free of charge, and the plant cannot afford to pay the switching charge. To fill the want, a gasolene locomotive will be built, which will be able to handle cars around a plant.

"The company will build gasolene motor cars for the commercial world at large and we will begin building additional cars at once at Omaha," said McKeen, when asked where the new motor car shops were to be located. "We have now at the Omaha shops 41 cars completed or under construction and the first business of the new company will be to complete the cars now partially built. The arrangements for the enlargement of the shops to provide facilities for the future construction of these cars on a large scale are not crystalized, but at present the cars will be built in Omaha.

"The demand for these motor cars is large and could not be met when the shops were operated as a part of the Union Pacific shops. We cannot confine the usage of this wonderfully economical means of transportation to one road, and consequently a separate corporation has been formed to manufacture these cars upon a large scale."

Diamond Lands a Big Marsh Rim Order.

One of the first large contracts for 1909 accessories has been written by the Diamon Rubber Co., of Akron, O., for the equipment of 2,500 Chalmers-Detroit cars with Marsh quick-acting rims. According to the Diamond Rubber Co. this is the largest single order for quick acting rims ever given. The sale of the rims has doubled in 1908 over 1907, and indications point to a further large increase for the coming 1909 season.

Garwood Gets a Motor Plant.

Garwood, N. J., is to have a motor manufacturing concern in the Hicks Manufacturing Company, which begins operations this week. Albert B. Craft, of Cranford, N. J., is the agent for the concern, and associated with him are Henry E. Hicks, of Plainfield, and William B. Elliott, of Westfield.

Coil Makers Expand Their Factory.

The Jacobson-Brandow Co., of Pittsfield, Mass., which recently entered the field of spark coil and accessory manufacture, is extending its factory facilities. New quarters have been taken in the Gamewell block on Columbus avenue.

Haynes Has Settled on One Model.

Only one model will be made by the Haynes Automobile Co., of Kokomo, Ind., for the 1909 season. The concentration will be effected on a car which will sell at $3,000.

The Week's Incorporations.

Little Rock, Ark.—Little Rock Auto Co.; capital stock increased from $10,000 to $20,000.

New York City, N. Y.—New York Coach and Auto Lamp Co.; capital stock increased from $5,000 to $20,000.

Orange, Conn.—West Haven Motor Co.; certificate of dissolution filed by F. A. Watrous and E. T. Hazlehurst.

Spencerville, O.—Spencerville-Lima Auto Transit Co., under Ohio laws, with $10,000 capital. Corporators—A. D. Adkins and others.

Salt Lake City, Utah—Knight Carriage and Automobile Co., under Utah laws, with $50,000 capital. Corporators—John A. Knight, John M. Knight, William A. Knight.

Chicago, Ill.—Universal Automobile Appliance Co., under Illinois laws, with $20,000 capital; to manufacture and deal in automomobiles and appliances. Corporators—C. Anred, R. P. Bates, William H. Enrich.

Moline, Ill.—Velie Motor Vehicle Co., under Illinois laws, with $10,000 capital; to manufactur and deal in motor vehicles, gasolene, electric or steam. Corporators—Willard L. Velie, Otis E. Mauser, Stuart Harper.

Jersey City, N. J.—Safety Electric Operating Co., under New Jersey laws, with $500,000 capital; to manufacture, operate, buy and sell motor vehicles. Corporators—H. W. Andrews, G. E. Osborne, Charles D. Montague.

Chicago, Ill.—Bell Speedometer Co., under Illinois laws, with $50,000 capital; to manufacture speedometers and other automobile and bicycle supplies. Corporators—Dwight B. Carmichael, John F. Power, James S. McInerney.

Jersey City, N. J.—National Taxameter Co., under New Jersey laws, with $30,000 capital; to manufacture, buy, sell or deal in any article, product or accessory thereto used in transporting either persons or property Corporators—Ernest P. Burritt, F. E. Ellison, Albert White.

Grabowsky Joins Independents.

Another member has been added to the American Motor Car Manufacturers' Association in the Grabowsky Power Wagon Co., of Detroit, Mich. The general manager and designer is Max Grobowsky, who was for several years connected with the Rapid Motor Vehicle Co., of Pontiac, Mich., of which his brother, Morris Grabowsky, is secretary. The new company is making a specialty of sight-seeing cars, police patrols, and commercial wagons, a removable power plant being a construction feature. It will exhibit at the Grand Central Palace show.

Will Make "Ruth" Automobiles.

In the footsteps of the famous foreign designer, who names his cars after his daughters, Milo Daniels, of North Webster, Mass., is about to produce the "Ruth" automobile. With his father, Charles Daniels, he has formed a company and secured a factory, where operations have commenced.

Sanders a Franklin Field Man.

F. H. Sanders, for several years a Franklin demonstrator and salesman for Adams & Hart, of Grand Rapids, Mich., has been engaged as a field salesman for the H. H. Franklin Manufacturing Co., of Syracuse, N. Y. He leaves in the near future for an extensive trip in the northwestern territory, visiting dealers and instructing them as to the mechanical features and selling points of the latest Franklin models.

Selden Testifies in Ford Suit.

Testimony in the famous suit against the Ford Motor Co. and others as to the validity of the Selden patent is being given this week by George B. Selden himself in the sur-rebuttal proceedings. It will be four years next October since the litigation commenced in earnest and the mass of testimony taken in that time would, in its printed form, fill a small library.

Velie Vehicles for Moline.

Moline, Ill., is to have another automobile manufacturing concern in the Velie Motor Vehicle Co., which has been incorporated with a capital stock of $100,000. The new company is an offshoot of the Velie Carriage Co., of Moline, its incorporators being W. L. Velie, Otis E. Mansur, and Stuart Harper, all of whom are directors in the older company.

Aldrich to Sell Aluminum.

Raymond D. Aldrich, well known to the trade as a lamp salesman and former representative in Detroit for the Brandenburg Brothers Co., has gone with the U. S. Bronze Co., of Cleveland, Ohio. He will push the sales of the complete line of aluminum specialties which the company makes for the automobile industry.

Loos Starts in for Himself.

W. L. Loos, former manager and purchasing agent for J. T. Bill & Co., at Los Angeles, Cal., has gone into business for himself in Oakland. Automobile accessories and supplies will constitute one of his jobbing lines, and complete machines will be handled also at his retail store.

Hatch Resigns from Thomas.

Mason B. Hatch has resigned his position as sales manager of the E. R. Thomas Motor Co., of Buffalo, N. Y., to go into the retail field. He will handle the Chalmers-Detroit line exclusively in Buffalo and surrounding territory.

Open Permanent Headquarters.

The Philadelphia Automobile Trade Association has opened a permanent headquarters for the convenience of its members. Rooms have been taken at Suite 216 in the Odd Fellows Temple.

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POPE RECEIVER'S JUNE REPORT

Statement for the Month Under the Connecticut Receivership—The Figures Given in Detail.

The June report for the receivers of the Pope Mfg. Co., in Connecticut has been filed with the clerk of the Superior Court in Hartford. The cash balances in the banks and in the office total $587,338.47, with some $109,000 outstanding, while the accrued liabilities of the receivers have amounted to $48,117.47.

The detailed statement follows:

Balance in banks and cash in office, May 31, 1908		$422,261.64
Cash Receipts for June, 1908.		
Receipts from collection of accounts and notes receivable of Pope Mfg. Co.:—		
Hartford accounts		$831.18
Westfield accounts		445.58
Hagerstown accounts		2,220.37
		$3,497.13
Receipts from sales by receivers.		$254,163.49
Receipts from deposits by customers on orders for automobiles		3,985.00
Interest Received:—		
On notes receivable	$1.00	
On bank balances	2,258.00	
		$2,259.00
Rental from Thompsonville factory		100.00
Refund of special advances		7.14
Returned insurance premiums		7.76
Misc. items of income		23.00
Receipts from and for account of receivers:—		
In Massachusetts	$1,148.95	
In Maryland	180.88	
In Illinois	1,050.00	
Pope Motor Car Co., Toledo	3.93	
Pope Motor Car Co., Indianapolis	81.33	
Federal Man. Co.	8.15	
	$2,473.24	$266,515.76
		$688.777.40

Cash Disbursements for June, 1908.

Refund of deposits received on misc. undelivered orders		$3,672.62
Receivers' expenses and payments for purchases:—		
Payrolls factory and office		$44,650.45
Misc. and selling expenses		794.95
Material and supplies		47,480.80
		$92,926.20
Receivers' fees:—		
Albert L. Pope		$500.00
George A. Yule		500.00
		$1.000.00
Payments in settlement of accounts with:—		
Receivers in Mass.	$933.47	
Rec. in Maryland	2,530.44	
Rec. in New Jersey	263.77	
Rec.in Toledo	56.84	
Rec. in Indianapolis	55.09	
	$3,840.11	$101,438.93
Balance in Am. Nat. Bank	$325,263.84	
Balance in Phoenix Nat. Bank	260,126.52	
Balance in First Nat. Bank	266.19	
Cash in office	1,681.92	
		$587,338.47
Accrued Liabilities of Receivers:		
For materials, supplies and miscellaneous expenses		$45,846.69
For payrolls, factory and office.		2,270.78
		$48,117.47
Balances due receivers of Pope Mfg. Co. and Pope Motor Car Co., from other districts		624.57
Accounts receivable from sales of receivers May 31, 1908, per last report		181,997.15
Sales of receivers for June, 1908.		201,700.55
		$383,697.70
Less cash collections for June, 1908	$254,163.49	
Deposits credited to accounts receivable, cash discounts and miscellaneous contra accounts	30,246.05	$284,409.54
		$99,288.16
Balances due from receivers of Pope Mfg. Co. in other districts of receivers of Pope Motor Car Co. for transfer of merchandise and supplies, and advances for expenses		$9,801.02

Selden's Patent Share is Sure.

Out of the $46,173.29 disbursed by the receivers of the Electric Vehicle Co., of Hartford, Conn., during the month of June, not the least interesting item is the sum paid George B. Selden for his share of Selden patent royalties and amounting to $11,745.45. The cash receipts for the month were $47,265.82.

The cash statement of receipts and disbursements is as follows:

Receipts.	
Cash on hand June 1, 1908	$120,104.11
Cash collected on E. V. Co. acct.	515.85
Cash collected on receivers' account	46,120.37
Cash interest Am. Nat. Bank	629.60
	$167,369.93
Disbursements.	
Payroll	$17,884.00
Traveling expenses	315.70
Purchasing creditors	12,853.98
Freight and express	80.24
Commissions	250.00
Petty cash	484.78
Telegraph and telephone	17.19
Legal expenses	1,591.95
Receivers' salaries	800.00
Storage	150.00
G. B. Selden	11,745.45
Cash receipts	$167,369.93
Cash disbursed	46,173.29
Balance on hand July 1, 1908.	$121,196.64

Lindsley to Enlarge.

An extensive enlargement of the Lake & Neff automobile works at Dowagiac, Mich., is in prospect under the new ownership of the J. W. Lindsley Co., of Chicago. Frank Lane has been retained as manager of the plant.

TRADE SOUND IN WESTERN STATES

DeLisser Saw Strange Contrasts in Automobile Demand—Ajax Changes Follow His Trip—Agents Entertained.

Just returned from the Pacific Coast, with fresh impressions and some unusual observations on business conditions, Horace De Lisser, president of the Ajax-Grieb Rubber Co., of Trenton, N. J., takes a very healthy and satisfactory view of the outlook, seasoned with some little surprises in what he saw. His trip took in everything from Seattle to Los Angeles and all the principal places en route.

In San Francisco general business is still dormant, he found, the banks preferring to lend money on building operations, which are very extensive. In the automobile business a peculiar state of affairs exists in that light touring cars are much in demand, while runabouts appear to be a positive drug on the market. In Los Angeles he found exactly the reverse to be true, with no explanation observable.

With the exception of the flooded district in Kansas, bumper crops are general in the agricultural sections, with a corresponding local prosperity in every instance. As the farmer is assured of plenty of money, De Lisser looks to the West as a big market for the medium and low priced machines. Evidences that many manufacturers are laying extensive plans for this business also came within his notice.

The tire business he found in very good condition, and to aid its development so far as Ajax tires are concerned, he left a number of changes in his wake, which are to take effect almost immediately. Among these is the bringing to New York of Harold Stimson, manager of the Seattle branch, who will become assistant to the president at the New York office, having immediate charge of the branch houses, of which there will shortly be ten. Frank Lumsden, formerly of the Ford Motor Company, succeeds Stimson as manager at Seattle. George Packer, formerly of the Scott Tool & Supply Co., has been appointed manager of the Denver branch. A new branch in Kansas City will shortly be established on Grand avenue, and this will be in charge of a prominent tradesman of that city with whom negotiations have been practically closed. Still another branch will be opened in Philadelphia, the exact location of which has not yet been decided upon.

Hardly had De Lisser arrived in New York before he came upon the convention of branch managers of the Maxwell-Briscoe Motor Co., 23 in number, in session at Tarrytown. These he corralled for a trip in a special Pullman to the new Ajax-Grieb factory on Tuesday, where they saw Ajax tires in all stages of tire making, returning to New York for dinner and the theater.

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FRANKLIN Automobiles

Is "something for nothing" any more likely in automobiles than elsewhere?

Look at what Franklins do; and the little they cost to do it. Look at how they are made. Ride all day in any Franklin. You enjoy every minute. So do your passengers.

You get all the speed you want. You do things on hills that no other automobile of the rating can touch. You keep on going—never mind grades, sand, mud or the rocky, bumpy stretches that knock the life out of a stiff steel-frame automobile with half-elliptic springs.

This sort of going in such an automobile wastes the engine power, wears out the machinery rapidly and is hard on the passengers.

The Franklin with its large wheels and tires, its four full-elliptic springs and its laminated wood-frame doesn't mind these jolts and jars. They don't reach the engine nor the passengers.

You leave the hard-riding automobile behind. You do it with perfect comfort and less wear and tear and less operating cost.

Franklins weigh on an average a third less than other automobiles of similar capacity; so that you carry the same passengers for a third less tires and a third less gasoline.

Even at the same weight the air-cooled Franklin engine does the work on 25 per cent. less fuel than a water-cooled automobile. And you have no plumbing system to fuss with—no water to leak nor boil, nor to freeze in winter. You can use your Franklin any minute day or night every day in the year.

You can't wear out a Franklin. The first experimental Franklin made in 1901 is in good use to-day. So are all we ever made, so far as we know.

Franklins are not cheap to make. Their materials and construction are the highest grade. They cost a good deal more *per round* than ordinary automobiles. But considering the work they do and their low-running cost and their 365 days of service in a year, and the long time they last, they are after all the most economical automobiles you can buy.

You get what you pay for. Franklins are worth the money.

16 h. p. 4-cylinder Runabout $1,750	28 h. p. 4-cylinder Touring-car or Runabout... $2,850
16 h. p. 4-cylinder Touring-car.. 1,850	42 h. p. 6-cylinder Touring-car or Runabout... 4,000

Prices f. o. b. Syracuse

Write for catalogue describing the Franklin.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JULY 16, 1908.

The Farmer as an Automobile Buyer.

That conception of manufacturing which believes in finding out what can be sold and where it can be sold, and then making it to be sold there, rather than to confine production to some arbitrary fixed ideal, has certain opportunities in automobile manufacture at the present time which are not to be overlooked. These arise from the fact that this year no small portion of the money of the country seems likely to lie for quite a period to the credit and at the disposition of that portion of the populace which has devoted itself to the coaxing of products from the ground and which this spring has been rewarded with promises of extremely abundant and fruitful returns. This alone would not be sufficient were it not that coupled with the affluence now in prospect there is an itching for motor car possession and a conviction that the automobile has practical benefits from a business and economical standpoint.

To strip the proposition of all its euphemism, that neglected and in some quarters despised customer, the farmer, is going to spend money for automobiles this season to an extent that is unbelievable to those who have not given the matter study. The business that has already been done in motor vehicles designed with particular regard to his purse and fancy has reached astonishing proportions, its volume being such as to attract the commercial sense of at least two of the largest organizations that have relations with him.

Those who insist on doing business with the kid-glove and check-book set or not at all, may see no possibilities in the well recognized prosperity of the agricultural communities. To them the thoughts of dealing with so rude and uncouth a class, which bears traces of stinginess, are more or less impossible, due to certain antiquated impressions and prejudices which actual contact with the Western farmer would quickly remove. But for the manufacturers who can adapt themselves to conditions and markets, without sacrificing any tenets of sound business, the assured prosperity of the Western farmer is a call to action.

Future of the Electric Vehicle.

That the field for electric vehicles never as yet has been exploited to anything like its full value, is a conclusion which must develop on close consideration of several of its peculiar characteristics. Up to the present, it has been more or less in competition with other power driven vehicles intended solely for highway service. Yet even in that respect it has become differentiated, in that its fitness for metropolitan service, as contrasted with that over the common dirt highway, and for commercial as contrasted with purely pleasure duty, have become its leading features. In one or two of its commercial applications, which have only recently come to notice, though by no means of recent origin, however, lie the germ of what may be considered one of the brightest sections of its future field.

The experimental use of electric trucks by the Pennsylvania Railroad for freight and baggage transfer, opens an extensive outlook in itself, but not half as suggestive as the kindred possibility of utilizing similar vehicles, of both large and small capacity for purposes of freight transfer in industrial plants. Take for instance the lighter type at present employed in railroad service, which, though strictly motor driven, is controlled like an ordinary hand truck, through a tongue which is held by the operator. With the great latitude of design which lies at the command of the electric vehicle designer, it would be perfectly possible to modify such a design in a number of ways to meet the demands of the necessary transportation which is now performed in large manufacturing plants by the aid of overhead cranes, telpherage, and more frequently, by means of ordinary push trucks.

Such vehicles, might be made with low platforms, the motor and battery being carried at one end, as in mine locomotives, and of capacities suited to the needs of the materials to be handled. Without limitation as to radius of travel, they might be shifted about from point to point in the plant, as occasion demanded, and employed either for long or short hauls. Similarly, larger sizes, following the more conventional design of the ordinary electric might be made to supplant even the industrial railway, and with economy, since no trackage, and no stationary plant other than the regular power plant, would be required. Their attendance need be only that of the driver, who also attends to the loading, while the batteries, charged at night, and massed under the care of a single electrician, would form in many instances, a welcome "equalizer" on the otherwise, low, night load of the power department. Among other advantages the simplicity of operation, low maintenance cost, low operating cost, and absence of noise and fire risk, which are reckoned in favor of the electric for road service, must count equally in its favor when given special applications such as these.

The real point of superlative excellence, which makes the suggestion of such uses tenable, is that the electric vehicle is absolutely flexible as to the nature and arrangement of its three elementary groups. There must be a running gear, a battery and a motor. These elements may be arranged absolutely at the will of the designer, subject to the peculiar demands of the service contemplated. Such advantageous qualities are lacking in self-propelled vehicles employing other sources of power, and their applicability to such purposes, really extraneous to the proper province of the automobile as ordinarily recognized, are limited accordingly.

The absolute tractibility of the electric current as applied in isolated power units, has given rise to a host of modern improvements in industrial undertakings, never dreamed of before the days of the portable

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machine tool and to economies unheard of before the application of individual drives for machinery of various sorts. In a similar way, the development of the electric vehicle, especially of the small type adapted to special uses, gives promise of still other conveniences and economies, which even yet are unknown.

Friendliness of the Carriage Makers.

By contrast with its former hostile attitude, the present eagerness of the carriage-making industry and trade to cement itself more closely to the automobile business is, to say the least, interesting to behold. The production of bodies, which was the perfectly natural entering wedge, has been followed with a more cordial regard, until, after several years of constantly increasing business from this source, the carriage-makers in general have come to recognize an extremely profitable outlook in the repairing of motor cars. Now it has come to be appreciated that in performing the double function of carriage and automobile repairer, a full measure of business may be obtained, and dull times tided over—the more so, because, as a well, known journal of the trade puts it, "the average automobile is in the repair shop much oftener than the average carriage, on account of the useage and recklessness to which it is subjected."

"Were it not for the popularity of the motor car," as this authority continues, "many carriage shops throughout the country would be finding it difficult to weather the slack period in regular carriage work. Herein lies the advantage to carriage builders of catering to both branches of the trade. The carriage builder who can do a good job of automobile repairing is the man who is keeping the wheels of his business going these days."

And herein also, lies a certain disadvantage to the user, unless he be exceptionally fortunate in securing the services of a good machinist as well as a good carriage maker. For the automobile is still much less a carriage than a machine, and no store of knowledge relating to matters of carriage work alone, is sufficient to cope with the demands of the hybrid modern mechanism of the elaborate car. As has been pointed out more than once, the province of the carriage builder is essentially confined to the production of bodies. The mechanical side of the motor car, he may work up to, as it were, but his early experience and the traditions of his trade are in many respects at variance with its best practices. Therefore, it behooves the user and the manufacturer to be cautious in entrusting work of the mechanical sort to carriage builders, unless they are especially equipped to handle it. Ultimately, the importance of their position is destined to be of the greatest significance. But the alliance must be a gradual one and conservatively advanced on both sides.

Needs of the Country Garage.

To the automobile tourist is given an opportunity of contrasting broadly the garage conditions afforded by the typical metropolitan establishment, and the average country equivalent which stands as substitute for it by necessity, though seldom from choice. The differences are mainly due to the relative natures of the "plants," in the two instances, and they, in turn, to the differences in the amounts of business carried and the outlay warranted thereby. But in the last analysis, it is evident that the average country garageman, like many of his brethren in the town, is wasting his efforts merely through lack of ability to foresee what his patrons will be apt to require, and lack of tact in caring for their needs.

Some one has defined a garage—as though a definition were of any particular use—as serving a three-fold purpose, namely that of a store for the supply of fuel, lubricant and other running necessities; a machine shop, where repairs of any and all sorts may be performed; and a repository for the safe keeping of the machines during the intervals between their periods of service. The distinguishment thus afforded between the various divisions of the main purpose of the garage is useful in this connection because too many garagemen lose sight of the fact that these purposes are distinct.

What the average city garage has, which the average country garage has not, is above all, system and departmentization. It is true, that in the small plant, it is difficult to separate the various divisions of the work, and that confusion and its kindred difficulties follow very often merely through lack of space, and lack of funds to establish a systematic arrangement. But when the proprietor has a clear idea of the advantages of cleanliness and order, he is usually able to do a great deal toward remedying even this defect in his surroundings.

System is, to a degree, self-propulsive. If a certain article has a stated place, its absence from that place indicates neglect, and conversely, its very presence in good condition, suggests its use. Once a garage, no matter how limited its scope, has been placed on an orderly basis, and organized along right lines, it becomes attractive to the user, and, as is particularly true with the country garage, the transient customer may become either a friend of a foe, according to the treatment accorded him.

The garage business resembles in many of its aspects the hotel business. Once the proprietor has learned the secret of so pleasing his patrons as to enlist them in his service, the relative value of his geographical location becomes of measurably less importance. The principle applies in degree to the garage. The sophisticated metropolitan garageman has learned the secret of pleasing his patrons by a dozen little attentions which his experience has taught are of value. The man with a small place outside the city limits, is too prone to regard his location as an unprofitable one from the standpoint of large volumes of business, and to overlook the importance of those little details which count for so much in the long run.

Statistics gathered directly from the user by the various makers, in many instances have formed valuable contributions to the fund of general information on the subject of the costs of motoring. The outcome of a recent prize competition for chauffeurs is the latest instance in point, furnishing as it does, an astonishing revelation of the possible maintenance cost of new, high powered and well made machines. It must be borne in mind, however, that these are exceptional figures rather averages in the absolute sense. They show what it is possible to accomplish where proper care and a good machine are brought together.

COMING EVENTS

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

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IN HOT PURSUIT OF GLIDDEN TROPHY

The standing of the teams in the Glidden competition was on Wednesday night, July 15, as follows: Automobile Club of Buffalo, Team No. 1, (Pierce Great Arrows, Nos. 1, 2 and 3), perfect score; Automobile Club of Buffalo, Team No. 2, (Reo, No. 4, and Premiers, Nos. 8 and 9) perfect score; Chicago Motor Club Team, No. 1 (Haynes, Nos. 19 and 20, and Olds, No. 35), perfect score; Rochester Automobile Club Team, No. 2 (Studebakers, Nos. 24, 25 and 26), perfect score; Bay State Automobile Club (Marmons, Nos. 21, 22 and 23), perfect score; Columbus Automobile Club (Peerless, Nos. 5, 6, and 7), perfect score; Chicago Motor Club Team, No. 2 (Rainier, No. 15, and Oakland, Nos. 27 and 28) 997⅔ points; Rochester Automobile Club Team, No. 1 (Selden, No. 32, Gaeth, No. 10, and Thimos, No. 11), 666⅔ points; Cleveland Automobile Club (Garfords, Nos. 29, 30 and 31), 664⅔ points; Automobile Club of Syracuse (Franklin, Nos. 12, 13 and 14), 626⅔ points. For certificates only, Stevens-Duryea, Nos. 16 and 17, perfect scores.

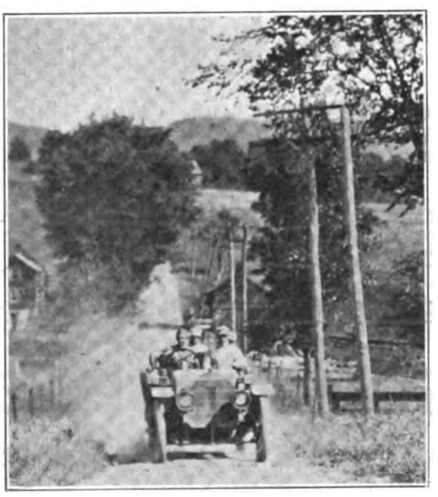
For the Hower trophy for runabouts the standing was as follows: Pierce Arrow, No. 100; Pierce Arrow, No. 103; Premier, No. 104; Stoddard-Dayton, No. 107; Stoddard-Dayton, No. 112, perfect scores.. Reo, No 101, points remaining, 988; Overland, No. 110, points left, 967; Stoddard-Dayton, No. 109, points left, 832; Franklin, No. 106, points left, 819. The cars out are Gearless, No. 105; Overland, Nos. 108, 110 and 111; Gyroscope, No. 113, and Moline, No. 102, the latter two continuing as non-contestants with the intention of making the entire distance of the tour.



STARTING THE TOURISTS FROM BUFFALO—TYPICAL CROWD OF SPECTATORS

Busy policemen had a lively time keeping the crowds back so that the touring contest for the Glidden and Hower trophies might have a favorable start from Buffalo, on Thursday, July 9th. Promptly at 10 o'clock, however, the tour began and one by one the 56 cars intending to go the distance were sent off, accompanied by a few misguided enthusiasts who trailed along for part of the first day's trip. The 46 competing cars had been parked in official open air garage space the night before, under the direction of the chairman of the tour, so that there was no delay in lining them up for the start.

The first day's run, from Buffalo to Cambridge Springs, Pa., a distance of 117 miles, gave a route which for a large part of the way skirted along the edge of Lake Erie. The schedule of 5 hours and 52 minutes for the big cars was very easy, as almost all of the drivers took advantage of the good roads to get in some fast work. John Breyfogle, driving a Gearless car in the Hower class, was the first to suffer mishap, his machine striking a telegraph pole near Westfield, N. Y., just 62 miles from Buffalo. A broken frame and other damages put the car out of the contest. L. A. Talbot, driving a Franklin, broke a spring, but by ingenious welding at a blacksmith shop was able to repair it himself, thus avoiding penalization. On arriving at Cambridge Springs it was found that there was much confusion as to the rules, particularly on the part of observers who undertook to instruct the drivers as to the interpretation. Minor errors of checking in were therefore overlooked, but a lecture and a warning were given in the evening by Chairman Hower.



GOOD GOING IN HILLY REGION

A change was deemed necessary in Friday's route for the run from Cambridge Springs to Pittsburg, increasing the distance from 110 to 127 miles. The time schedule for the big cars was accordingly increased from 6 hours and 30 minutes to 6 hours and 45 minutes. The roads were rough and rutty for half the distance, but very good the rest. The towns along the way gave a glad welcome to the tourists, and Newcastle, Pa., turned out en masse. The local cops held the crowds to the curb and waved the tourists to go through as fast as they liked. Those who accepted the invitation and gave speed demonstrations on the brick pavement were loudly cheered. A too zealous flagman, in clearing the road, walked directly in front of H. A. Van Tine's Garford car just as it was turning a corner at speed. Van Tine veered to the curb to avoid hitting him, and broke a wheel in skidding. He soon got a new wheel from a local agent, but was disqualified at Pittsburg because the extra wheel was not inventoried and carried along originally. This

(Continued on page 526.)

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The First Gun

1909

MARSH RIMS

Chosen as Exolusive Equipment for a Total of 2,500 Chalmers-Detroit Cars

THE FIRST EXCLUSIVE RIM CONTRACT

ever written, it was given only after the most searching investigation and tests.

Quick acting in actual practice, not in name principally, Marsh Rims distanced every competitor.

100% EFFICIENCY

NO OTHER RIM CAN TOUCH THE MARK

"For ourselves, we insist on Marsh Rims. We recommend them everywhere," is the concensus of the leading trade's judgment.

Our 1909 proposition to manufacturers is vitally interesting—more, it is of extraordinary importance. We mean just this.

LOOK OVER THE ACCOMPANYING PAGE.

THE DIAMOND RUBBER COMPANY

AKRON, OHIO

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FOR 1909 MARSH RIMS

100% EFFICIENCY

What Quick Acting Rim predominated in all the 1907-8 automobile shows?

THE MARSH—20 per cent. more of them on cars shown than the highest competing make.

What Quick Acting Rim has been mostly used in the Glidden and other tours and runs this year?

THE MARSH—Emphatically. Its superior record has been even more conspicuous.

What one Quick Acting Rim has been successfully used in racing this year and last?

THE MARSH AND THE MARSH ONLY—The winning of the 190-mile Savannah race is just a sample instance. MARSH RIMS stay on, but can be taken off and applied in a few seconds.

What rim has led all others in 1908 sales—not only to the trade but particularly upon consumer's specifications.

THE MARSH RIM—by a wide margin, and this without price juggling or private inducements.

In a word, it was THE MARSH RIM against the field for 1908, and THE MARSH RIM won.

For 1909 it is the same, and the field does not measure up to 100 per cent. efficiency—and never did and can't.

THE MARSH RIM has and does. Results talk. Absolute efficiency, unvarying reliability, ease of manipulation, safety and uniformity—against these there can be no offset.

THE DIAMOND RUBBER COMPANY

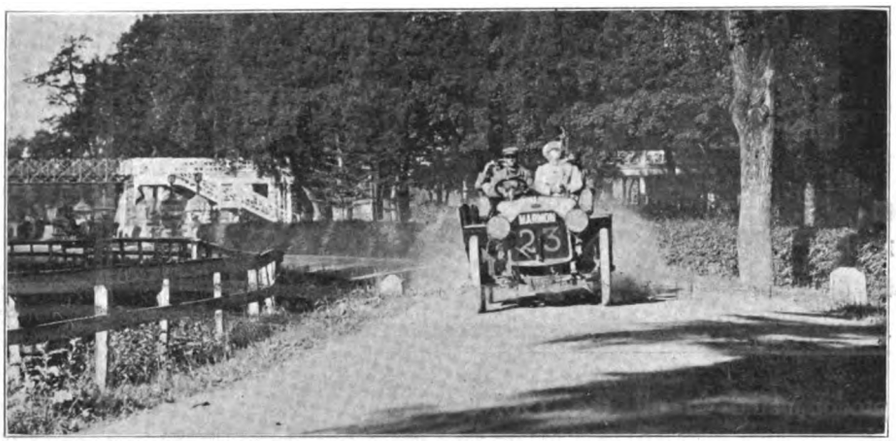
AKRON, OHIO

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In Hot Pursuit of Glidden Trophy.

(Continued from page 523)

brought 333⅓ points penalty against the Cleveland Automobile Club team. The Oakland No. 28, of the Chicago Motor Club Team No. 2, was penalized 7 points, bringing 2⅓ points against its club. A connecting rod bearing replacement was the cause. The Gyroscope car in the Hower class fell behind and did not get in until long after the others.

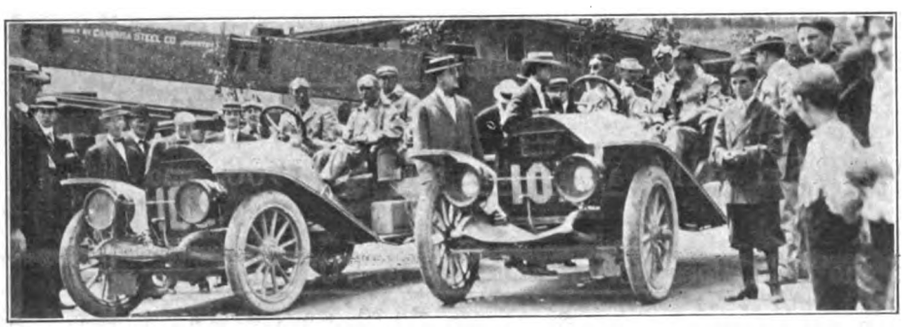


ONE OF THE MARMONS LEAVING BEDFORD SPRINGS HOTEL

Saturday's run, July 11, was 106 miles, from Pittsburg to Bedford Springs, Pa., with a seven-hour schedule for the biggest cars. Tortuous, winding roads, around the edges of cliffs took the tourists over one of the highest points in the Alleghenies, after which it was a dangerous slide, with smoking brakes, down to where Bedford Springs lies between the two main ridges of the mountains. The cars had to be driven to the limit that the roads would permit in order to make the schedule, and on alighting at the Springs the drivers and passengers could hardly walk for the bruising and jouncing that they had had. Their faces were covered with masks of hardened dust. To make their joy complete, they were given the cheering information that they had arrived just too late for lunch, although a few of the early ones were served. In the Glidden class, W. H. Hurlburt's Garford, No. 31, incurred 6 points penalty, bringing 2 points more against the Cleveland team. The Overland, No. 108, driven by Mrs. E. W. Shirley, lost 9 points from its Hower score through tardiness, the Hower trophy Stoddard-Dayton, No. 109, lost 168 points, and the Overland, No. 111, was disqualified with a broken spring. The Stoddard-Dayton's difficulties arose through a wandering spark from the magneto setting fire to the gasolene at the carburetter. A lively fire resulted, which burned several hands and coats that were used to put it out.



GREAT ARROW TEAM ENTERING HARRISBURG



STODDARD-DAYTON TEAM AT HARRISBURG



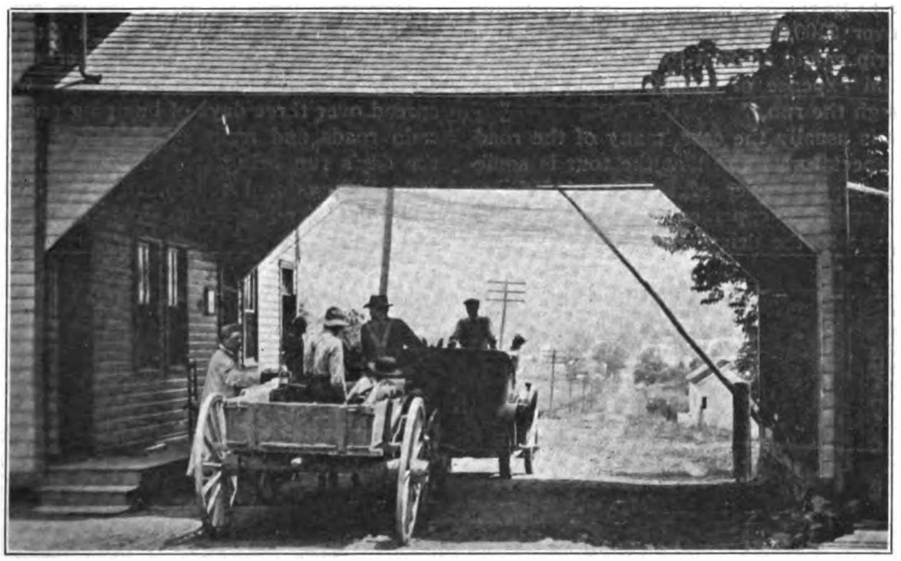
FRANKLIN TEAM—ONLY AIR COOLED CARS IN THE TOUR

Sunday at Bedford Springs was a day of rest, and everybody honored it as such by getting up late. The leisure of the day gave the tourists the opportunity to get acquainted. It was found that there were four women on the trip. Mrs. E. W. Shirley, Mrs. Joan Cuneo, Mrs. W. C. Marmon, who was with her husband, and Mrs. E. S. Berwick, with Mrs. Cuneo. An alleged Japanese prince was also discovered, Togia Ninagowa, supposed to be studying automobile matters in America and taking the tour for experience. But he did not prove half so interesting as Mrs. Cuneo's black mascot kitten, which was doomed to a violent automobile death the next day through too great a confidence in motor cars. The "Mudlarks," veterans of the endurance run to Pittsburg in 1903, got together and made merry, repeating the stories of that swim, but even their festivities did not last very late and everybody got to bed in good season.

The 13th was an unlucky day, not alone for the black kitten, which was killed. Two clubs were penalized and three Hower contestants lost points. It was 157 miles from Bedford Springs to Harrisburg, and the schedule was six hours. The Rochester Automobile Club, Team No. 1, lost 333⅓ points through the retirement of the Selden, No. 32, because of a broken spring, three miles from Harrisburg, while the Syracuse Club lost 20 points through a 60-point penalty

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against Franklin, No. 12, which also had a broken spring. In the Hower class, Franklin, No. 106, dropped 181 points, the Moline, No. 102, lost 51 points, and Mrs. Shirley's Overland, No. 108, got 102 points more. On account of the sickness of her mechanic's father, she dropped out of the contest, to give the mechanician the chance to hasten home. It was a hard climb over



PAVING THE WAY AT SCRUB RIDGE, NEAR McCONNELLSBURG, PA.

the last half of the Alleghenies, enlivened by triumphal arches in some of the small towns, but down grade into Harrisburg was speedy and exciting. The Motor Club of Harrisburg did the honors at a smoker in the evening.

From Harrisburg to Philadelphia on Tuesday was an easy 134 miles, and no penalties were incurred except by the Moline, which limped in at midnight with cylinder trouble. "Rough Rider" Hurlburt drove his Garford in such romping style that he tossed Benny Smith, a mechanic, out of the car, and as empty air offered inadequate support, Benny fell with a thud on the road near Reading. He had been perched on the back of the car, with his feet on the rear seat, and was not prepared for the jolt that sent him out. However he absolved Hurlburt from all blame for his scratched face and bumped head. The Quaker City Motor Club gave a smoker at Horticultural Hall.

Wednesday, July 15, completed just six of the twelve days' touring, the run being from Philadelphia, through the Delaware Water Gap to Milford, Pa., which is in Pike county. The distance was 132 miles, and only Hower contestants suffered. Of these the Reo, No. 101, lost 12 points, and Overland, No. 110, dropped 33 points. The Moline, No. 102, withdrew to put in a new cylinder, and continue as a non-contestant.

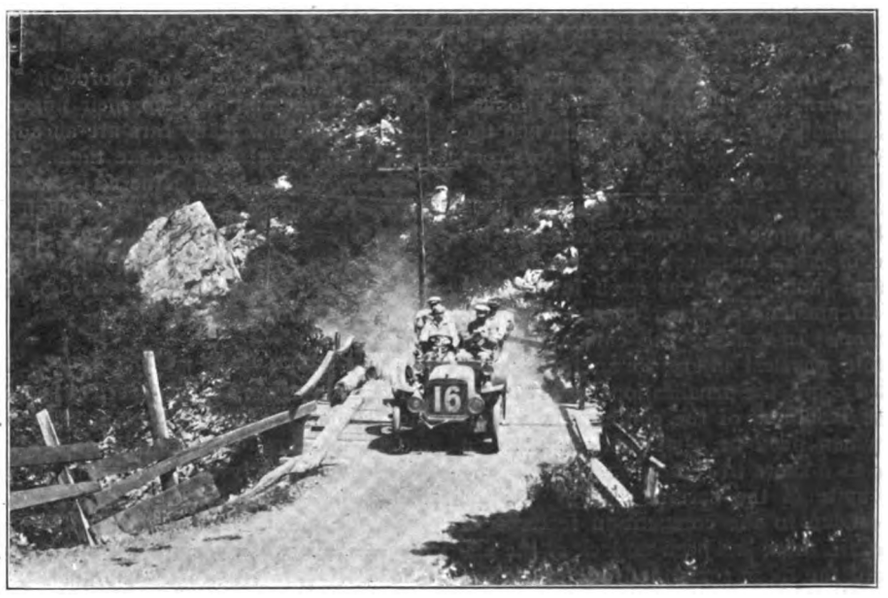
The converse of "No news is good news," is almost equally true, that good news is no news, especially as applied to the cars in the tour, where accidents and penalizations constitute the chief topics of conversation and discussion. In the same sense it has been pointed out that there is no news in the fact that the cashier of the prominent bank did not abscond with the funds or that the great trust magnate still loves his wife, and the application follows in pointing out that in the Glidden and Hower contests a large number of the cars are running so regularly and surely as to be denied the attention that is their due.

There are six Pierce Great Arrows in the tour, three in competition for the Glidden trophy and representing one team of the Buffalo Automobile Club, two in the struggle for the Hower trophy, and one as an official car for the use of Charles J. Glidden and Chairman Hower. All of them are in the hands of "home-grown" Pierce drivers who know their cars better than most men know their wives.

Three Marmon cars uphold the Bay State Automobile Club's claims for the trophy with an ease and steadiness that is calculated to make the club well content with its chances, while three Studebakers give the Rochester Automobile Club every reason for confidence. The Columbus Automobile Club is represented by three Peerless cars, painted red, white and blue, respectively, all of which have made perfect scores. Were it not that they are only competing for certificates, the two Stevens-Duryeas, with perfect scores, would make an element of team strength for any club, being able to hold their own in every circumstance. The Automobile Club of Buffalo, in its No. 2 team has mixed company, consisting of two Premiers and a Reo, and the Chicago Motor Club also has a mixture of makers in its No. 1 team, consisting of an Olds and two Haynes. All of these cars have run to the tune of perfect scores.

In the Hower contest the work of the two Pierce Arrows, the No. 104 Premier, the No. 107 Stoddard-Dayton, and the No. 112, Stoddard-Dayton has been so regular and uneventful that their less fortunate companions have attracted most of the attention. Needless to say, however, as the contest narrows down, the survivors with perfect scores loom more into the limelight.

As the donor of the trophy, Charles J. Glidden, feels entitled to views on the tour, and these he expressed at Harrisburg by saying; "This annual tour has progressed far enough to warrant calling it the severest test to which the automobile has ever been put and I doubt if a single car completes the long tour in a perfect condition. During my driving of the automobile I have witnessed several important endurance contests in different parts of the world, but have seen none requiring such skill, care and judgment of drivers as the one now un-



RUSTIC BRIDGE, 50 MILES FROM PITTSBURG

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der way. Rumors are afloat that the winner will be challenged to a contest by some foreign and domestic manufacturers under the rules of 1907. Any manufacturer whose car arrives at Saratoga with or without a perfect score will be in a position to challenge the world and win any kind of a contest under the rules of 1908, which requires the careful scrutiny of observers appointed by a competing manufacturer."

The perfect score cars on club teams that were penalized through the mishaps to one or two of the trio composing them are apt to endure a shade of unjust stigma where they should be regarded with equal honor to those on teams no members of which were penalized. As individual performances their work is exactly the same. Two Franklins of the Syracuse team, the only air cooled make to be represented, enjoy the immunity from penalties that comes of perfect performance, and similarly the Thomas, the Oakland, the Rainier, the Gaeth and the Garford are individually in the forefront with perfect scores.

Such cars as have incurred penalties have not been stripped of honor as a result, because in many instances there was no mechanical fault of the car itself involved in the circumstances which caused the penalization. In making the choice between possible physical injury to another and a spoiled score, the penalizations bear witness to the readiness of the contestants to forget, when need be, that there is such a thing as a score to reckon on.

In spite of the natural tension on the nerves due to the competition features of the affair, there has been no lack of the display of the more social and lighter side of life. At Cambridge Springs there was a great rush for a swim in the river and bathing pool, the scene resembling the scramble of schoolboys just released from class making a race to the swimming hole. Because of the more or less negligee costume which many of the drivers affect during the summer months there were all sorts and conditions of tan on exhibition, and those who could show the most and the blackest tan excited the same envious regard that is accorded the boy in the school yard who can wiggle his ears the best.

As a relaxation from the physical ardors of the trip, "Rough Rider" Hurlburt spent several quiet hours figuring out how big an automobile it would make if all the cars in the Glidden tour were rolled into one. After revising his mathematics several times he announced to a breathless audience that such a car would be so big that it would use up 150 gallons of gasolene for the trip, together with 20 gallons of lubricating oil and $4,000 worth of tires. Furthermore, it would have to travel 100,000 miles. Its cost would be over $100,000, and the depreciation on the trip would amount to $30,000, involving a total expense of $60,000 to put the car through the run.

As is usually the case, many of the roadside spectators think that the tour is something on the order of the Grand Prix or the Vanderbilt cup race, and shout encouragement to the drivers accordingly. Some of the more officious and thorough "rooters" rush out and hold up their fingers to indicate just how many cars are ahead, and urge extra speed to overtake them. Many of the crowds that had gathered in the small towns to see the tourists go through look positively grieved when the cars proceed at a modest pace and are pleased only when mufflers are opened and a seemingly reckless dash is indulged in.

Fourteen Made Perfect Scores.

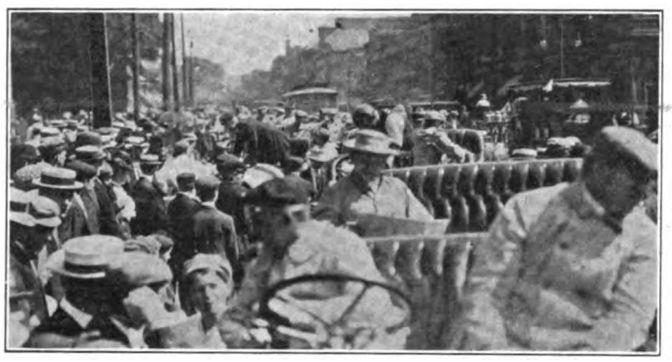
Fourteen drivers earned perfect scores in the reliability run promoted by the Automobile Dealers' Association of Southern California on July 3, 4, 5 and 6, by completing 350 miles of give and take road on schedule time. Of the original number of starters, six were penalized, two failing to finish.

The long run started from Los Angeles on Friday morning, 3d inst., and the first day's journey took the tourists to San Diego, where a stop over night was made. Sixteen cars survived the first leg of the run without penalization, but two fell down on the run from San Diego to Riverside on Saturday. The roads were in good condition except in several sandy spots, and better results were made than on the first day. After a rest in Riverside over Sunday the tourists continued up the coast through San Bernardino to Los Angeles. The perfect score winners were:

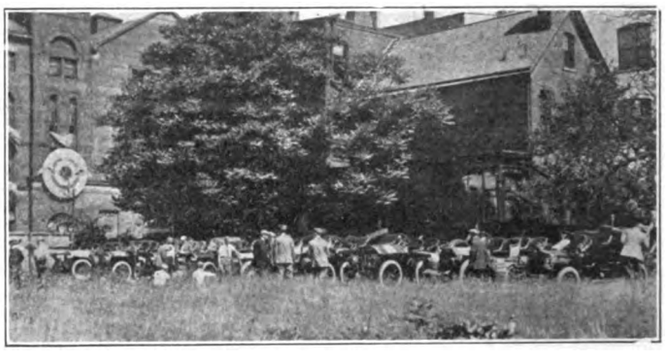
Miss Gladys Moore, Cadillac; Mrs. W. J. Burt, Tourist; F. A. Raney, Stoddard-Dayton; R. D. Rose, Elmore; Lee Motor Car Co., Cadillac; Guy West, Auburn; H. E. Gilley, Autocar; Lord Motor Car Co., Studebaker; J. H. Bennett, Tourist; W. N. Congdon, Tourist; Joseph Pike, Auburn; V. S. Beardsley, Tourist; Greer-Robins Co., Mitchell, and J. S. Conwell, Tourist.

Huthbert Wins Rocky Mountain Run.

Charles Huthbert, driving a Rambler roadster, was declared the winner of the Rocky Mountain roadibility test, which spread over three days of bumping on Colorado roads and trails on July 2, 3 and 4, the day's run being from Denver to Colorado Springs and return, to Fort Collins and return, and again to Colorado Springs and return.



SCENE EXEMPLIFYING POPULAR INTEREST



VIEW OF THE OPEN AIR GARAGE

When the contest ended on Saturday night, five cars were found to have perfect scores, but as an absolute winner of the trophy had to be evolved the technical committee got out its pads, pencils and magnifying glasses and went over the cars critically. The result of this examination made the Rambler driver by Huthbert the victor.

The contest was more than a reliability run, with certain controls to make on time. It was a sealed bonnet test as well and 3 of the 16 starters were eliminated the first day, and 5 on the second. Eight cars finished in Denver on the last day, with five apparently perfect scores among them, the finishers being:

Charles Huthbert, Rambler; Eugene Grady, Pierce Great Arrow; Roy Yockey, Corbin; J. W. Billow, Mitchell; O. G. Linder, Gaeth; Martin Fletcher, Reo; G. A. Clarke, Great Smith, and S. E. Norton, Buick.

Automobiles to Unite Ohio Towns.

Transit facilities between Lima, Lafayette and Ada, Ohio, are to be afforded by the men behind the Spencerville Auto Transit Co., who are forming a new company for that purpose. They have purchased one large automobile which is to go into commission at once, and it is planned to have an equipment to run at least four trips daily between the points named. Full service is promised within a month.

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CLOSE CONTESTS AT ARROWHEAD

Daring Climbers Safely Negotiate Depot Lane's Crooked Steep—Electrics Administer a Surprise to Doubters.

Contrary to all expectations there were no casualties at the Depot Lane hill climbing contest, held near New York City, on Saturday last, 11th inst., by the Riverside Motor Club, whatever that may be. Depot Lane, sometimes known as Arrowhead Hill, because it is near the Arrowhead Inn at 177th street and Lafayette boulevard, is a tortuous narrow lane averaging 15 per cent. grade and containing three turns. It is about one-third of a mile in length.

Because of the dangerous course, and expected casualties which did not occur, the events were not as well filled as they might have been and the contest did not attract a great crowd of people. The fastest time of the day was made by Arthur Dennison, driving a 48 horsepower stock car, when he covered the twisting lane in 23⅗ seconds, in the free-for-all class.

There was one feature of the meet that is entitled to consideration and that is that the various events were more closely contested than has been the case with other hill climbs in a long time. In the event for gasolene cars selling for over $4,000, which was won by William Bourque, the times made by all the cars were between 24⅗ and 25⅗ seconds, inclusive. The same feature marked all the events.

Some of the wiseacres went wrong when they predicted that the electrics could not get up the hill for they climbed right up to the top without hesitation and made better time than was scored in one of the gasolene events.

One of the features of the meet was an event for taxicabs, the first ever held in America. It was won by M. Kelar, in a Keaton, with Dennison second. Kelar climbed the hill in 35⅗ seconds, and the slowest time made in the event was 41⅘, illustrating how close the events were contested.

One of the features that did not materialize was a race between a four-in-hand of horses and an automobile. The events were disposed of so rapidly that the timing apparatus was torn up before the horses arrived on the scene. The summary:

Gasolene Cars Selling for $850 or Less.

Frank Dunnell, Ford	0;32⅖
W. H. Ladd, Maxwell	1:01⅖
A. Comancho, Gyroscope	1:14⅖

Gasolene Cars Selling from $851 to and Including $1,250.

Frank Dunnell, Ford	0:30⅖
Tommy Forbes, Overland	0:38⅕

Gasolene Cars Selling from $1,251 to and Including $2,000.

Tommy Forbes, Overland	0:45⅗
Manville, Palmer & Singer	0:49⅘

Gasolene Cars Selling from $2,001 to and Including $3,000.

William Bourque, Knox	0:20⅘
F. L. Lescault, Palmer & Singer	0:26⅗
William Dunnell, Ford	0:30⅗

Gasolene Cars Selling from $3,000 to and Including $4,000.

William Bourque, Knox	0:24⅘
Stewart H. Elliot, American	0:25⅗

Gasolene Cars Selling for Over $4,000.

William Bourque, Knox	0:24⅕
K. Swan, Stearns	0:25⅖
Stewart H. Eliot, American	0:25⅗
Mitchener, Lozier	0:25⅗

Taxicabs; to Carry Four Persons, Including Driver.

M. Kelar, Keaton	0:35⅗
A. Dennison, Knox	0:35⅘
Stewart H. Elliot, Garford	0:36⅖
Felix, Bianchi	0:39⅘
Charles F. Fox, Franklin	0:41⅘

Free-for-All.

A. Dennison, Knox	0.23⅖
William Bourque, Knox	0:23⅘
Stewart H. Elliot, American	0:25⅘
Frank Dunnell, Ford	0:33⅘

Electric Vehicles.

H. E. Wagner, Babcock	0:41⅖
Dr. A. C. McIntosh, Babcock	0:44

Little Rock's First Hill Climbing Contest.

Fourth of July in Little Rock, Ark., was celebrated by a hill climbing contest and a mile road race, the first automobile events ever held in that city. The feature of the meet was the driving of B. H. Bricker, American. He won the hill climb with 3 seconds to spare, and was well in the lead in the road race when an accident put him out of the running. The summaries:

One Mile Road Race.

1	E. P. Ladd, Buick	1:10
2	I. K. Miller, Buick	1:24
3	P. W. Stift, White	1:33
4	George Daniher, Buick	1:43
5	A. N. De Mers, Buick	1:44
6	R. M. Baker, Buick	1:53
7	H. Blakeslee, American	2:36

Hill Climb.

1	B. H. Bricker, American	1:03
2	R. M. Baker, Buick	1:06
3	E. P. Ladd, Buick	1:32
4	P. W. Stift, White	2:12
5	H. Blakeslee, Franklin	2:22
	J. K. Miller, Buick	2:56

Huntsville Owners Form a Club.

With a membership of 26 the automobile owners of Huntsville, Ala., on July 2d, organized the Huntsville Automobile Club. The officers are: President, Dr. J. G. Burman; vice-presidents, Sterling P. Metcalfe and Mrs. Mary Turner Clanton; secretary, Mrs. R. E. Smith; treasurer, Mrs. R. T. Baugh; chaplain, Rev. Francis Tappey.

Oklahoma Organizes State Association.

The Oklahoma State Automobile Association formed "to prevent oppression of or discrimination against its members," and to secure uniform legislation, has taken out incorporation papers. Lieutenant-Governor G. W. Bellamy, of Oklahoma, is one of the incorporators. The others are E. E. Blake, F. H. Wright, R. S. Trulock, G. W. Compton, E. D. Humphrey, and H. Harms.

A. A. A. DECIDES TO STAND PAT

Important Action of Central Conference Committee—Unanimous Decision to Retain Vanderbilt Cup Rules.

A proposal to curry favor with foreign racing interests by so modifying the conditions governing the forthcoming Vanderbilt Cup contest as to fall in line with the Ostend rules, was rejected at a meeting of the Central Conference Committee, representing the American Automobile Association and the American manufacturing bodies, held in Buffalo, N. Y., Tuesday of this week, 14th inst. The action followed a suggestion made in Paris to the Committee on Foreign Affairs of the A. A. A., to the effect that the recent action of the foreign clubs in refusing to sanction the event, would be rescinded if the racing board would consent to hold it under the conditions already in vogue abroad. In thus determining to stand pat on its original plans, not only are the American makers who are preparing cars for the race relieved of considerable anxiety and a deal of needless expense which otherwise would be incurred, but the dignity of the governing body itself is considerably enhanced.

Among those present at the Buffalo conference, including representatives of the National Association of Automobile Manufacturers and the American Motor Car Manufacturers' Association, were president Thomas Henderson and General Manager S. A. Miles, of the former body; E. R. Thomas, Chairman Jefferson De Mont Thompson and A. R. Pardington, of the A. A. A. racing board. S. D. Waldon and H. D. Chapin also represented the manufacturers. The decision rendered was taken only after a lengthy discussion of the situation, and was unanimous.

It was the spirit of the meeting that any other action than that taken would be unfair to the American makers, since it would not leave them sufficient time to build cars to conform to the changed rules. Further, the idea of a possible change of method in making up the foreign rules for another year also was taken into account. The hope was expressed, however, that in the event of possible recognition of the validity of the position of the A. A. A. in the future, a uniform method of car rating might be agreed upon.

Meantime, it is again announced that an "international flavor" will be imparted to this year's Vanderbilt race by the presence of several foreign cars, no less than four of which already have been entered. The course has already been selected, and is 25 miles long. As has been announced, it will be partly on the newly completed section of the Long Island Motor Parkway, and partly on local, State and county highways.

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CAREFUL CHAUFFEURS WIN CHECKS

Remarkable Records Made in Long Contest for Winton Prizes—Frank Schneider Takes First Prize of $1,000.

When, in August last, the Winton Motor Carriage Co. offered cash prizes to the ten drivers of their new "Six-Teen-Six" who should show the best running records at the end of a year's use, it was not supposed that anything like 65,688 miles could be accomplished at an upkeep expense of $15.12½. Yet this remarkable showing has been obtained by totalling the records of the winners of the $2,500; which was the incentive for economical driving.

The conditions of the contest required that the contesting chauffeurs should render monthly reports of their mileage and up-keep, the reports to be certified by their employers; final affidavits were to be made both by owners and chauffeurs. Four newspaper men consented to act as judges.

First prize, $1,000, was awarded to Frank Schneider, chauffeur for Milton Schnaier, of New York. Schneider drove 11,683 miles in seven months, averaging 1,669 miles per month, at an upkeep cost of $12. Schneider's expense was not incurred until after the car had been driven 8,000 miles, and as no other contestant achieved this mileage without expense the judges were unanimous in awarding first prize to him.

The second prize of $500 went to Arthur Donovan, chauffeur for J. Axebrod, of New York. Donovan drove 7.570 miles in 3½ months—a monthly average of 2,162.8 miles, with no upkeep expense. The third purse of $250 was won by Harry Toomey, chauffeur for Harry S. Pickands, Euclid, Ohio. A record of 6,632.9 miles in 10 months, with absolutely no expense was his record. Toomey's report showed an expense of $284.85, but as this expense was incurred by an accident happening while the car was in the hands of the wife of the car owner, the judges ruled that it was not chargeable against either the car or the chauffeur.

The standing of the ten successful competitors in the order of their awards, is given by the accompanying table. Contestants whose totals erceeded 3,000 miles were awarded gold watches suitably engraved.

The Winton company has announced that the $2,500 contest for chauffeurs will be repeated in 1909, under conditions to be announced later.

Prize	Driver	Total Mileage	No. of Months	Average Miles per Month	Total Upkeep Cost	Average Upkeep Cost per Month
$1,000	F. Schneider, New York City	11,683	7	1,669	$12.00	$1.714
500	A. J. Donovan, New York City	7,570	3.5	2,162.8	0.	.000
250	H. A. Toomey, Euclid, Ohio	6,633	10	663.3	0.	.000
150	C. L. Bonner, Brooklyn, N. Y.	6,806	8	850.7	3.	.375
100	J. Boice, Atlantic City, N. J.	6,183	7	883.3	.025	.003
100	A. R. Cowperthwaite, Newton Center, Mass.	6,114	4.5	1,358.5	0.	.000
100	J. Arnold, Chicago, Ill.	5,535	6	922.5	0.	.000
100	J. Townsend, Elkins Park, Pa.	5,415	6.3	855.4	0.	.000
100	G. W. Butler, Chicago, Ill.	5,155	3.2	1,628.2	0.	.000
100	E. C. Knapp, Buffalo, N. Y.	4,594	5.5	835.3	.10	.018
	Totals	65,688	61	1,076.8	$15.125	$0.25

Where Automobiles Make à Horse Useful.

By using a horse to pull automobiles to and from the washing stand, and for moving them about the garage, the proprietor of the Zacharias garage in Asbury Park, N. J., estimates that he can save $800 a year in salaries alone. Zacharias has been using this method for transferring cars for about a month and finds that the horse does the moving in about one-third of the time required by the four or five men necessary to move a car. The horse moves the cars with little difficulty.

The plan for moving the cars is very simple. A large hook is attached to the front of the car in taking it to the washing stand. A man is at the wheel and when going to fast the brakes are applied to stop it at the right place. In returning a car to its section, the hook is attached to the rear of the machine and the speed with which it is drawn back enables the car to run to the side of the garage steered in by a man at the wheel.

Police Chief Resorts to Mild Measures.

Chief of Police Corson, of Swampscott, one of the fashionable summer resorts near Boston, Mass., has concluded that traps for automobile scorchers are useless, and he has decided upon a better plan of securing observance of the speed regulations. When an automobile is seen going at a speed that is thought to be greater than the law allows, its number will be taken. The automobile register will be consulted, and the next day the owner will receive a notice that reads:

"Mr. ——. Dear Sir: Your automobile was going at a high rate of speed on (date) on (street).

"This notice is sent you to request you to be more careful in this town in the future. If not, we shall be obliged to prosecute."

Of the 2,150,000 miles of highway in daily use by the greater number of the inhabitants of this country, nearly 2,000,000 miles are earth roads.

MITCHELL CLAN MAKES MERRY

Second Annual Jubilee of California Owners Bigger than the First One—Ladies Compete in Hill Climb.

The second annual jubilee of the "Mitchell family" as the owners of Mitchell cars in California are designated collectively, held on July 2, 3 and 4, was a bigger success than its inaugural last year. While the first annual jubilee of the whole doggone Mitchell family was a success, since that time the family has been much blessed and multiplied, so that this year's reunion was marked by as large an outpouring as would a reunion of all the Young and Smith tribes in Utah.

Nearly 100 cars went from San Francisco to San Jose on July 3, and this number was augmented at the rendezvous by the arrival of other big Mitchells and the little ones as well from other California cities. San Jose's doors were thrown open wide to admit them and when the annual hill climb on Alumn Rock hill on Friday, 3d inst., was called the family was still arriving.

The course for the hill climb was a mile in length and as there was no trade rivalry to contend with the event was one of pure sport. Thirty-two drivers tried for the prizes offered in seven events, a large number of them being women.

Mrs. J. W. Skinner, of Stockton, started the ball rolling when she won the 1908 touring car class by driving her car up the incline in 1:21. John R. Chase, of San Jose, was second. L. Brassey, of San Jose, took the next event, for touring cars made prior to 1908, by covering the distance in 1:19. F. E. Hebbard, Santa Maria, was second and E. P. Lion, San Jose, third.

Another woman carried off the prize in the 1908 roadster class, Miss Marion Walcott, of San Francisco, doing the stunt in 1:34⅖. W. H. Pomery, of San Jose, was second in 1:35 and W. W. Wilson, San Francisco, finished third. In the runabout class for cars made prior to 1908 Dr. C. E. Mitchell, San Francisco, won a signal victory in 1:43⅕. Dr. R. L. Rigdon was second and H. O. H. Shelly third.

The ladies class for cars of any model was captured by Miss Walcott and Mrs. C. J. Brodie won in the ladies' touring car class. Miss Walcott's time was 1:34⅖ and Mrs. Brodie climbed the hill in 1;26⅖.

The program for the Fourth consisted of a run from San Jose to Del Monte, and over 300 cars took part. In the evening there was an elaborate banquet, fireworks and a dance. The only sporting feature at Del Monte was a 17 miles speed judging contesst. The time schedule was 1 hour 30 minutes, and two drivers—Hugo Miller and Fred Edwards—made absolutely perfect scores by coming in exactly on the dot of time.

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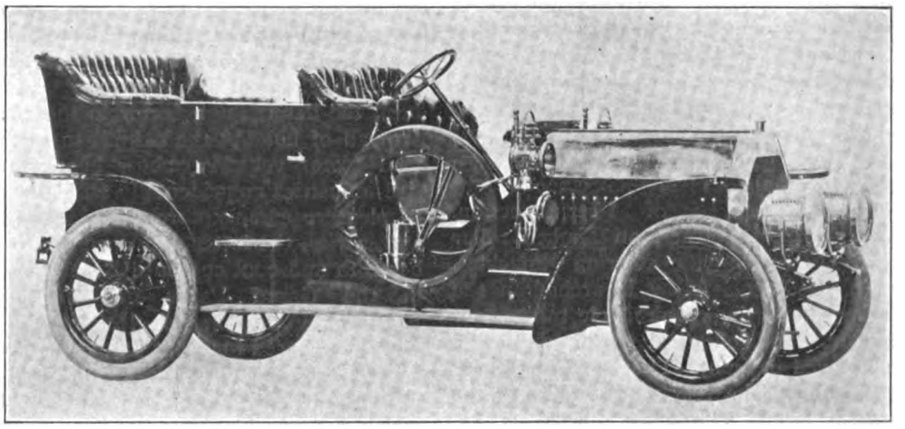
ORIGINALITY IN THE METEOR

Special Features in Car That Relatively is a New Comer—Sturdy Type of Medium Powered Vehicle.

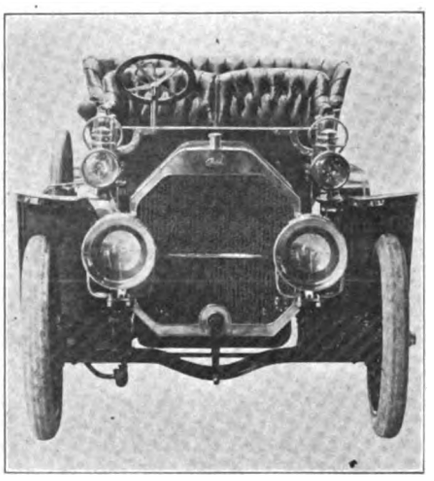
Among the cars which are to be reckoned with as relatively new comers in the field may be numbered the Meteor, which its makers, the Meteor Motor Car Co., Bettendorf, Iowa, have dubbed, "the car that does things." In earnest of the good intentions which lie back of the product, it should be added that though the car is practically a new comer, it represents no less than three years of work prior to its introduction. Of the machine in general, it is a sturdy representative of just over the medium powered class, selling at a figure just over what has come to be called the medium price. As the illustrations show, it possesses several original features, while conforming in general to standard specifications.

The motor, which is of the conventional four-cylinder vertical pattern, has cylinders of 5 by 5½-inch dimensions, valves disposed on opposite sides, and a special form of outer jacket wall permitting the use of large flat cover plates on either side, ensuring ample room for cleaning the castings and for inspecting the metal. The cylinders are cast individually from a special grade of hard, close-grained iron. The pistons are cast from the same material and are fitted with four packing rings, three at the top and one at the botom, in addition to which two oil-grooves are provided to assist in the distribution of the lubricant. The crank shaft is cut from the solid billet, is of specially heat treated, chrome nickel steel, and runs on five large bearings, ground to size. The cam shafts, which carry drop forged cams, keyed in place, are mounted within the crank case. The oiler and magneto gears as well as the pump transmission, run in oil. They are placed at the front end of the motor.

A commendable feature is the method of placing the magneto and lubricator, which are located at the back of the motor, as shown in the accompanying views, and directly under the foot board. They are therefore perfectly accessible at all times, and may be inspected without raising the hood, and merely by lifting the toe board.



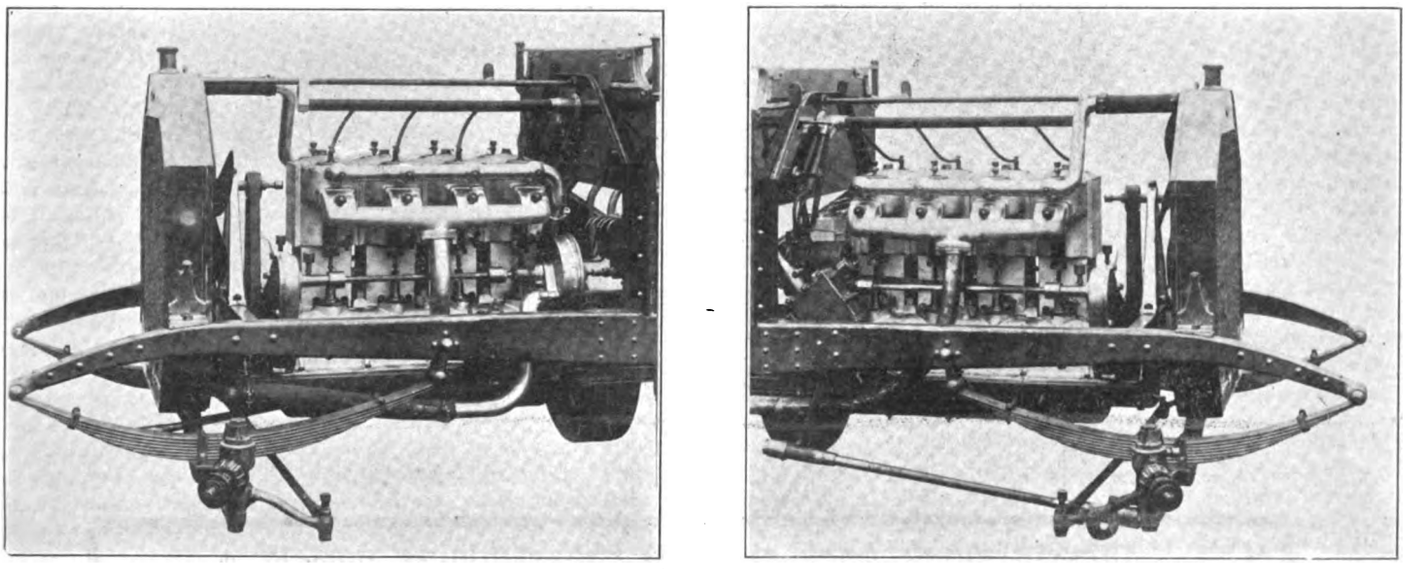
METEOR CAR, SIDE VIEW



METEOR CAR, FRONT VIEW

Dual ignition is employed, the system including the Eisemann low tension magneto, batteries, and coils. All wiring is enclosed in black fiber tubes, running along the front side of the dash and over the cylinders, whence the separate connections are taken to the Eisemann magneto plugs, which are placed over the intake valves. The switch and compression release valve—the latter affording a relief of 60 per cent. of the compression—are the only devices mounted on the dashboard.

Transmission from the motor is through a special form of multiple disc clutch, enclosed in the fly wheel and running in oil. Provision for adjustment is made in the shape of four studs with lock nuts, which project from the rear side of the casing. The change gear group is of the selective



POWER PLANT OF THE METEOR CAR, SHOWING LOCATION OF MAGNETO AND LUBRICATOR

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type, affording three forward speeds, besides the reverse, the third and highest giving a direct drive with all gears idle. The final transmission is through a propeller shaft, so designed as to work through a driving angle of about 2½ degrees, when the chassis is loaded to its normal capacity. The rear axle is of the floating type, of chrome nickel steel construction, and equipped with internal and external brakes, which are applied through balance beams.

The front axle is of I-beam section, mounted, like the other, on Timken roller bearings, even to the steering knuckles. The pressed steel frame is arched in the rear to afford the required clearance over the axle. Semi-elliptical spring mounting is employed in front. The members are 40 inches long. The rear mounting is of the platform type. The wheel base is 120 inches, and the wheels are 34 inches in diameter, shod with 4½ inch tires, front and rear. The total weight is 3,000 pounds.

The body, which is of long, easily drawn outline, is of 5 pasenger nominal capacity, with sufficient additional room in the tonneau for a couple of extra seats. Such relatively minor matters as fender and running board design, upholstery and body trim—the latter being of Circassion walnut wherever exposed—have been followed out in close detail.

Paris Salon to be a Tandem of Shows.

The Paris Salon this year practically will be two successive shows, with a week's intermission between the two. The expense of erecting a huge temporary building, as the growth of the industry made necessary for the salons of the past two years has been the determining factor in the change. Instead of holding the exhibition of industrial motor vehicles, motor boats and allied industries coincidentally with the show of pleasure cars, motorcycles, bicycles and accessories, the latter will open on November 28th and continue until December 13th, in the Grand Palais on the Champs Elysees. Following its close the Palais will be prepared for what practically will be a second section of the salon, opening December 22d and closing December 29th, at which industrial exhibits will be seen.

Maine's Income from Registration.

According to figures given out at the office of the Secretary of State, of Maine, the sum of $1,110 was received for automobile registration for six months ending July 1st of this year. For the same period the receipts from operators' licenses were a little in excess of the amount received for vehicles, being $1,208. Dealers' licenses added $180, and from registration of motorcycles came $126; making a grand total for six months of $2,624. The fee charged for the registering of automobiles and motorcycles and licenses to operators is $2, and for dealers' license $10.

Firestone Shows Its Credentials.

An instructive pictorial display of the commercial vehicle branch of the industry is afforded by a booklet of testimonial letters just issued by the Firestone Tire & Rubber Co., Akron, O., and containing illustrations of some 40-odd vehicles of different manufacture and different purpose, suggestively arranged. The accompanying letters, of course, sing the praises of the side-wire tire under various conditions of use. The latter portion of the book is devoted to similar matter, relating to the use of these tires for fire apparatus.

How One City Official Gets His Car.

Usually the purchase of a motor car by a municipality involves the making of a special appropriation for the purpose. The city electrician of Cambridge, Mass., however, has evolved a method by which an automobile may be obtained without any action by the financial committees of his city. He has brought about economies in the administration of the affairs of his department and by so doing has saved enough money to pay for a motor car.



Specifications common to all Palmer-Singer models

Nickel steel throughout. Imported F. & S. ball bearings exclusively. Bosch high-tension magnetos and Multiple disc clutches in all models. Nickel steel, double and single drop frames. Drop forged I beam, nickel steel front axle—four-speed selective type, sliding gear transmission with direct drive on third speed. All brakes equalized, all expanding type and on rear wheels. Universal joints on all steering connections. All types shaft-driven, all moving parts inclosed in dust-proof cases.

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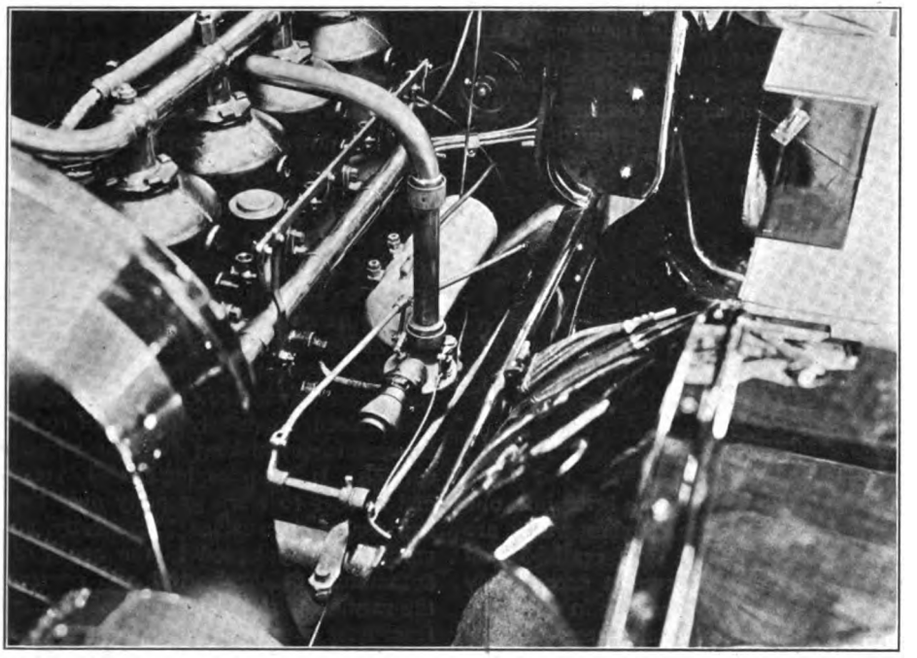
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FEEDS FUEL ON STEEPEST GRADES

Ramblers Now Equipped with Supplementary Tank—Furnishes Independent Flow of Gasolene in Emergency.

Years ago—that is about 10 years ago—it was not an unusual sight to see automobiles going backward up steep hills. The reason for this mode of crab like travel lay in the fact that many gravity tanks were so situated in the machine that the incline of the car on steep ascents placed the carburetter above the level of the gasolene with the obvious result that the fuel was not fed into the mixing chamber. Later designs largely overcame this defect, but even to-day it sometimes happens that on very steep hills, when the gasolene supply is low, the fuel cannot run by gravity to the carburetter.



RAMBLER ENGINE, SHOWING SUPPLEMENTARY GASOLENE TANK

With the knowledge of this condition, Thomas B. Jeffery & Co. now are building their Ramblers with a supplementary gasolene tank located above and behind the carburetter, considerably below the main gasolene tank. This supplementary tank will carry sufficient gasolene to run a car several miles up grade and is so arranged that it will flow into the carburetter on level or on a slight upgrade, but will not, under any condition, run back into the principal supply tank. The measurements of the tank are 4 inches in diameter and 10 inches long.

Costliness of Using Inferior Oil.

Economy in cylinder oil, either in its sparing use or in the purchase of grades which are chosen because of their cheapness, is a policy involving the error of "penny wise and pound foolish" action, according to H. E. Haws, of the George A. Haws Co., which manufactures Panhard oil.

"The importance of lubrication is not half appreciated," he says. "It is surprising how many will try to economize by buying inferior oils when the cost of lubrication is so insignificant as compared to the general cost of maintaining a motor car. There is no surer method of ruining a fine engine than by the use of an inferior lubricant and this policy of buying cheap oils is particularly foolish when a really high-grade oil can be bought for only a few cents a gallon more. It is a mistaken idea to suppose that all grades of oil are suitable for all grades of cars. We have gone into the subject pretty carefully and as a result of our experiences and tests, we like to recommend to a customer that particular kind of oil best suited to his motor."

Hub Caps that Require Watching.

Because of the small amount of attention which the wheels of the modern car ordinarily require, the average driver is apt to neglect to give them the necessary inspection. In many machines the hub cap is of no importance save as a dust protector and ornament. In machines having the rear floating axle drive, however, it is of the greatest use, since its removal releases the so-called hub-cap drive, freeing the wheel, and further rendering it possible for the driving stub of the differential shaft to work out, with consequent possibility of grave damage to the driving mechanism. On this account the condition of the caps should be watched very closely, and wherever possible, they should be secured from turning by means of locking screws set radially into the hub.

SIMPLY "A SUBSTITUTE FOR LEGS"

So Eames Defines the Electric Vehicle—He Estimates Its Mileage Capacity as of Neutral Importance.

Mere mileage capacity in its relation to the value of electric vehicles, a subject which was discussed at some length in the Motor World not a great while ago, is greatly over-estimated in its importance according to Hayden Eames, of the Studebaker Automobile Co., who concurs in regarding great mileage as a neutral recommendation by reason of other conditions which it implies. "A substitute for legs" is what he denominates the electric vehicle, and suggests that efforts to give it long distance abilities are generally attended with certain definite drawbacks which the average user cannot afford to overlook.

"We are hearing a good deal about electric vehicle mileage runs," he says. "Why is the unhappy public inflicted with a fresh outbreak of this kind of 'special performance'? Five or six years ago an electric car won a 185 mile race in France over competitors of all kinds. This was easily done, but the car was unfit for general use. It is not generally known that up to some six or seven years ago, the fastest automobile mile was made by an electric. The first road vehicle to make a mile a minute, was an electric automobile, but none of these qualities make for serviceability. An electric open vehicle is not supposed to do touring car or race track service.

"Anyone who buys an electric vehicle in comparison with a gasolene touring car must be misinformed, or at least fails to understand their respective applications. The sole ordinary application for an electric pleasure vehicle, is as a substitute for legs. It is strictly a convenience, and it should be designed with reference thereto. In these days of convenient and semi-automatic individual charging equipment, a provision in the design of an electric vehicle for mileage in excess of that required in its proper application, is simply wasted, and a positive disadvantage to the customer. Why should he be compelled to pay for a power plant to carry around a couple of hundred pounds more battery than he can possibly use? Why should he be compelled to maintain and renew 100 or 150 more plates of battery than he can possibly use?

"It is only by the addition of battery that additional mileage can be obtained without some other sacrifice. There are no mysteries to-day about the practical design of electric motors, of running gears, or even of storage batteries. Of speed and mileage there must be enough, but the popular conception that these have no limits of desirability, is entirely erroneous. The point is to design an electric automatic which best serves as a substitute for legs."

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ABOUT FRICTION TRANSMISSION

Where Watchful Care is Required to Maintain Its Efficiency—Some Errors to be Avoided in Driving.

While the average friction transmission is so simple as to require small attention in the way of upkeep, there is one point about it which should be watched with extreme care. In case the driving and driven shafts become disaligned, even though by a very slight amount, the effect will be to distort the pressure angle, bring the driving strains outside the plane of the disc, and besides tending to warp that member, cause uneven wear on the surfaces and reduce the amount of surface in actual contact at the driving point.

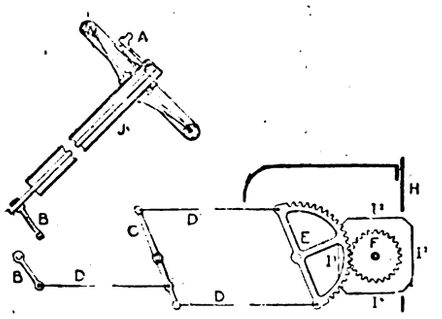
Another source of difficulty occasionally arises when the two shafts are warped or otherwise thrown out of the same plane so that the point of contact lies either above or below the center line of the shafts. In this case there is a tendency for the driven disc to creep either in or out on the driving member, tending to increase or diminish the speed of the car as the case may be, and, if this tendency is resisted by the locking device on the speed changing lever, proportionately increasing the strain in that quarter. In fact this matter of alignment, together with the need of keeping the working surfaces clean and in proper condition, involve all there is in the upkeep of this type of driving mechanism, except the lubrication of the shaft bearings.

While the extreme flexibility of the friction transmission is its greatest asset, care should be taken not to abuse this quality by too frequent use of the speed changing lever for braking purposes, or by attempting to change speeds too abruptly without altering the speed of the motor temporarily in order to "nurse" the gear into driving contact with as little slipping as is possible—as must be done with the ordinary type of sliding gear transmission. These practices cause undue slipping at the point of contact, with consequent abortive wear. The result is a reduction in the life of the parts, unsatisfactory service, and a general tendency to lose confidence in the effectiveness of the system.

Devices to Warn the Car Behind.

For the purpose of warning drivers of following vehicles of proposed manoeuvres on the part of the driver of a car, several different indicators have been devised. In the simplest of these, the mere act of declutching, causes a semaphore to be dropped automatically at the back of the car, thus exposing a sign with the word "Stop," printed on it. In others, the movement of the steering gear causes the indicator to announce the direction of a proposed turn. A recent French contrivance, which has been placed on the market by the Box Garage, a Parisian concern, however, differs from any of these in that it also provides a warning, as well as the stopping and turning signals, while, like at least one other which has been designed, it is operated manually, instead of by automatic means.

The mechanism by which this result is arrived at is sufficiently simple to be worthy of note, although it possesses the drawback of adding to the already over-complicated mechanism connected with the steering column. As shown in the accompanying illustration, the lever, A, which is mounted on the steering wheel beside the usual spark and throttle levers, is connected through a Bowden wire mechanism with a second lever, C, which, in turn, is connected to the sector, E, engaging with a pinion F, on the



indicator, I. By moving the lever into one or another of the four notches which are provided on its segment, the faces 1-2-3-4, on the indicator may be brought successively into registry with an opening in the back of the casing enclosing the mechanism, thus exposing them to view.

As used in France, the indications thus made available correspond to "Attention," "Stop," "Right Turn," and "Left Turn." The device is so contrived, however, that by a very slight alteration in its arrangement a greater number of signals could be employed, if so desired. Systems of this sort, while useful, especially for machines which are to be run extensively through closely crowded city traffic, lose something in value when they are not absolutely automatic, for otherwise their efficiency depends entirely upon the fidelity of the driver in actuating them. The value of this point is emphasized when it is further considered that when such a device is most needed, is usually at a time when the driver himself is fully occupied in taking care of some sudden emergency. At the same time, the arrangement here shown is sufficiently simple to be of some little suggestive value.

Keep the Fan Bearing in Condition.

Frequent attention should be paid to the condition of the fan bearing and its supporting bracket. Should they be permitted to become loose enough to throw the fan out of line, there is danger that it will scrape against the back of the radiator, tearing away the thin walls of the structure and doing an amount of damage which is totally disproportionate to the original difficulty.

IMPORTANT QUALITIES IN VARNISH

Special Requirements for Automobile Body Finish—An Expert Specifies Some Indispensable Characteristics.

How far the much desired richness of finish which characterizes the well made automobile body may be due to the use of a suitable varnish, the average user probably is not at all aware. That a considerable proportion of the lustre is obtained by properly skilled treatment, goes without saying. The important part played by the material itself, however, may be judged by the following requirements which have been set down by an expert:

"Working properties of varnish, its capability for working free and rich. and without a hitch in its power for flowing unrestrained over the widest expanse of surface, appeal to the user of the material, first of all," as he observes.

"The varnish that manages to meet the measure of working property demanded in the horse-drawn vehicle paint shop, may, and, indeed, frequently does, fail to satisfy the varnisher working over the automobile surface. It becomes lame, and "sets up," and refuses to work properly over the full expanse of the surface. Manifestly, such a varnish is ill adapted to the needs of the automobile finisher. And yet, contrawise, the varnish must have the gift of drying free from dust over night in apartments not invariably heated as the varnish maker suggests, or as the prudence of the painter would ordain. And to these virtues must be added that of fine brilliancy, with a richness of lustre, in fact, that goes down to the root of things and sets forth unmistakably all the deficiencies, big or little, which a careless or incompetent workman may have strewed in the way. Then there must be toughness of fiber, once the varnish has flowed to its position on the surface, and through the process of drying fastened itself there. And to toughness of fiber we must add elasticity, and its twin virtue, resiliency. For to meet the tremendous strain imposed upon the automobile surface, these properties must be present in varnish to an unbounded extent.

"Imperishability, that quality in varnish which protects its exposed film from the ravages of a thousand enemies, atmospheric and existing in the atmosphere, is another essential indispensable to the composition of the best automobile varnish."

To remove grease spots from the carriage cushion, wet the cloth with clean water and a sponge with a mixture ¾ ounce table salt and 2 ounces alcohol, either grain or wood. The time-honored recipe for revamping leather upholstery is raw linseed oil and turpentine used in the ratio of about 2 to 1.

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ANATOMICAL IDEA IN SUSPENSION

Principle of the Human Foot Adopted in New Foreign System—Details of the Method of Application.

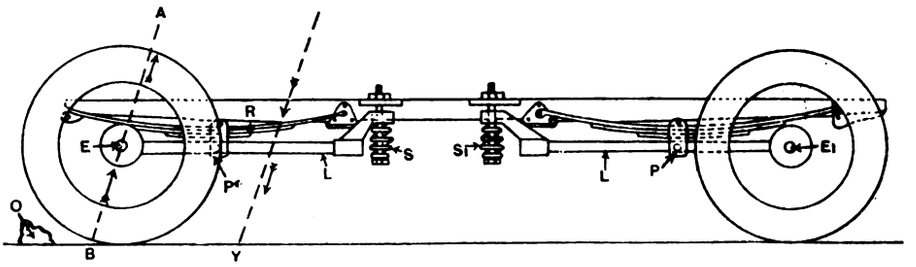
It is generally recognized that the all-important question of tire wear is dependent to a very large extent upon the method of design and construction of the spring suspension. The possibility of ameliorating the expense due to this cause by improving the suspension of the body has long been appreciated, but the difficulty of discovering a proper method of attack is a stumbling block which is as equally appreciated. Interesting light is thrown on the matter by the Autocar which introduces the analogy of the human foot and its mechanical structure, in what is virtually a brief for the Victoria suspension a system which has seen some little use in England, and is well worth considering for its own sake. As a contribution to a difficult subject and one which is none too well understood, it is of further value.

By way of fundamental definition the author indicates that the broad question of suspension comprises a proper consideration of two basic and opposed factors, that is to say, "the weight of the chassis, body, and passengers, on the one hand, and the various road resistances on the other. Between the two," he continues, "is the tractive or rolling medium—the wheels. But, on the one hand, for the sake of traction efficiency, we must keep the wheels in as continuous contact with the road surface as possible. On the other, we must protect the chassis and its load from the road shocks. So it follows that we must introduce some elastic medium between wheels and chassis to secure their mutual independence as far as possible. . . . .

" . . . . In all conventional systems this elastic medium—to wit, the springs—is so introduced that the forces of chassis weight and road resistance are maintained in direct opposition, the lines of force being directly opposed along the same plane. Consequently, the action of the suspension—which is exactly that of a rubber pad or spring, set in a wooden leg to deaden the shock—does not alter the permanent relation of the opposed forces along that plane in the slightest. This fact alone almost suffices to prevent the desired independence of chassis and wheels, even with three point suspension, and certainly restricts the function of the springs to that of mere intermediate buffers, and a further consequence is that the very resilience of the suspension which gives it a receptive action gives it a rebounding one, which, occurring, as it must, along that single line of opposed forces, further restricts independence. Thus, we have that leaping 'hunting' action set up, which is naturally fatal to keeping the tires on the road surface at a continuous and even pressure. And it is just the failure to do this that is the chief factor of tire destruction.

"So having seen in detail why conventional suspension systems fail to secure the independence of chassis and wheels, ... we must cast about for another method of dealing with the opposed forces. And the mechanics of the wooden leg having failed, what more natural than to consider those of the normal human foot, as in walking or coming to the ground after jumping?

"Now in this case, we have our forces balanced, instead of in direct opposition. That is to say, we have the stationary force (ground resistance) taken at the toe, which, with its joint, serves as an articulated point of adhesion—a fulcrum, in other words—for a rigid lever formed by the length of the foot. This lever supports the other opposed force—the weight of the body—somewhere about mid-length, and is enabled to do this by means of an elastic medium—the calf muscles—which are attached to the other end of the lever—the heel—as well as to the body, in both cases behind the line of the descending force.



"Actually that line bisects the lever midway, so, since the extent to which the body (force or weight) descends is regulated by the degree of muscular relaxation, it is clear that the two opposed forces are balanced at an oscillation point, floating, as it were, somewhere between their parallel opposed planes. It will also be obvious that, although the oscillation point never shifts, the extent of the lever oscillation can be varied to suit the strength of the opposed forces, because they are thus balanced. Also, that while the lines of force always maintain their parallel, they are free to approach or recede from each other, according to circumstances, in perfect independence because of this balancing. That is to say, their balance and independenct relation is unaffected, although the foot—the lever—be more or less extended or flexed according to the length of the step taken or the height jumpd from.

"So much for the mechanics of the matter; yet when we examine the results of its action we see that the point of adhesion—the toe—even when unshod, suffers no abrasion; nor, on the other hand, does the descending weight sustain any shock or vibration. But this, we remark, is the exact opposite of the results noticed in the action of the rubber padded wooden leg, in which the vibration is only lessened by the resilience of the rubber upon which the wear is consequently excessive.

"Now this compression of results, as applied to chassis suspension, certainly argues strongly in favor of the system of balancing the opposed forces, road resistance and chassis weight, upon, so to say, a floating oscillation point, as the true solution of the problem of tire maintenance. For it is clear that the independent relation of opposed forces thus obtained not only checks vibration and the transmission of road shocks, but also enables the tire at the point of adhesion to the road surface to maintain a constant and even pressure thereon, following all its contours. Therefore it follows that in the same degree as the failure of other suspension systems in this regard destroys the tires, the success of this one must preserve them.

"Hence the Victoria Suspension, invented by M. C. E. Kolb, 36 Rue de l'Arcade, which achieves all these results by a mechanical action exactly similar to that of the human foot, is not only extraordinarily interesting, but from its success in practice—as shown by a tour of several thousands of miles with a single set of tires which finished practically unworn—may be regarded as the most serious effort yet made to solve the tire upkeep problem in a mechanically accurate manner. For, as will be seen from the accompanying illustration of this system, the chassis and its springs are mounted, not upon the axles E-E1 direct, but in rocking joint P upon a tubular or pressed steel lever L, which is articulated to the axle E in a rocking joint at one end and supported at the other by the spring S, depending from the side member of the chassis. Thus the upward line of force of the road resistance A B is balanced against the downward line of force of the chassis weight X-Y at or near the oscillation point P.

"Now, when any one of the wheels meets any obstacle such as O, it naturally rises to surmount it, and in so doing would tend to compress the flat spring R and lift the chassis. Actually, however, this action is nullified, the spring R only acting as a shock absorber and supporter of the chassis. For the moment the effort or shock of the wheel rising occurs it takes effect upon the lever L, which oscillates at the point P, the weight of the chassis acting on the line of force X-Y to depress L against the pressure of the spring S or S1 at the other end. Consequently, the opposing forces of obstacle resistance and chassis weight are

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taken through the lever L by the opposed springs R and S, which compensate each other's action, and being thus deadened and nullified, the result is that the chassis is neither raised nor lowered. Thus the effect of shock and vibration is lost entirely, and the displacement of the axle E being entirely compensated by the action of the opposed springs, the tire and wheel simply roll over the obstacle at an unvaried pressure, absolutely independent of the chassis motion. The same result, of course, occurs when the wheel drops into a depression or hole in the road, the only difference in the action of the opposed springs being that the oscillation of the lever L releases the compression upon each simultaneously to an equal degree, the final result being the same in each case.

"But the achievement of absolute independence in the motion of chassis and wheels naturally connotes the elimination of all torsional strains. But a further interesting result of this system of suspension is that, although the wheelbase is lengthened some 60 c. m., the chassis is relatively better supported towards the middle than a chassis of equivalent wheel base suspended in the ordinary way. This, although the whole of its weight lies between the axles. . . . .

"It follows, then, from the foregoing results that the speed at which it is competent to employ solid or semi-solid tires instead of pneumatics is augmented from 30 per cent. to something not far short of 50 per cent., according to the weight of the chassis and body. Thus not only is the average touring car of medium weight driven at average touring speeds brought within the scope of solid tire usage, but an entirely new field of employment—and consequently an enhanced demand—is provided for a whole host of lighter vehicles, all because of the economy thus effected in tire maintenance. . . . .

"Here it may fittingly be pointed out that this suspension entails no special construction, but may be applied to any existing car by lengthening the shafting forward or aft of the gear box, according to whether chains or propeller-shaft transmission is used, together with an approximate lengthening of the brake rods, the fitting of suitably shaped hangers to the side members to take the middle springs, and the slight adaptation of the axles to take the rocking joints of the suspension levers. The whole conversion, in fact, should not cost more than $100 or $125, and should save its cost in tires in a year."

It should be understood, as he explains in conclusion, that his purpose is not to suggest the elimination of the excellent pneumatic, or to lessen the demand for it. Relative to this point he says that "on the contrary, it is intended to demonstrate a system whereby the innate good qualities of the pneumatic—now almost rendered latent by its defects—may be brought out to the fullest by the elimination of those defects."

SUGGESTS PERPETUAL MOTION

Philadelphia Inventor Makes Big Claims for New Motor—Carbonic Acid Gas Employed to Generate Power.

World-beating motors have appeared before now, but none, so far as is known, for which is claimed an output of anything like 100 horsepower from three cylinders, each measuring two inches bore and stroke—which is the claim advanced for the product of John Carroll, of Philadelphia, Pa., whose achievement is further signalized by the fact that it is actuated by the expansive force of carbonic acid gas. Although it is said that Carroll's efforts at perfecting this prodigy in miniature have extended over the past eleven years, it was not until early this week that they were sufficiently successful to permit of a public demonstration of the motor. At that time, mounted in the chassis of a well known make of small runabout, it proved to be perfectly competent to propel the machine over the paved streets of the city and up one or two trial hills.

While hints have been dropped from time to time to the effect that something of the sort was in progress, the extent of the exploitation contemplated was not suspected until the time of the demonstration, when it was announced that arrangements already are in progress to secure factory facilities for the production of cars propelled by the new motor, all of which are to be built in the City of Brotherly Love. It was further stated in the same connection that work upon them will be commenced immediately so that the cars can be ready to market in the fall. At present, the experimental work is being conducted in a shop in Filbert street, while the offices of the company are in South Penn Square.

Although the exact details of the invention are lacking, it is made to appear that the marvelous nature of the motor is not confined to its apparently disproportionate power production. From newspaper reports it is learned that its cylinder dimensions are 2 by 2 inches, as above stated; that each cylinder carries two pistons working in opposite directions and connected to the crank shaft through suitable linkages, and that the main portion of the device is cut from a solid piece of steel, its outside dimensions being 13½ by 10½ by 4½ inches, as well as that it is capable of developing no less than 100 horsepower. The valve motion is connected by direct and unvarying gearing, it is said, while the power and speed control is vested entirely in a hand throttle—no change speed gearing being required.

The truly wonderful part of the invention, however, is explained in the following paragraph, revealing a cycle of operations which, if the matter is not merely a dream, should cause the ingenious Carnot to turn in his grave:

"The power is furnished by a small tank which is filled with carbonic acid gas. This tank is connected with the engine, the gas going to the engine through a small copper tube about as thick as a lead pencil. When the gas has gone through the engine it goes back into an exhaust tank after passthrough which it is recondensed and flows into the first tank from which it originally came. In addition to these two tanks, there is an auxiliary tank for conveying an extra supply of carbonic acid.

"There is no light or heat about the Carroll motor," continues the description, "and therefore it cannot burn out or freeze. It can be run anywhere on the hottest or the coldest day. A chemical solution, which Mr. Carroll says is mostly coal oil, is used in the tanks to prevent the possibility of corrosion or oxidation."

If, as is implied by this, the gas is recondensed and returned to the original supply tank by the 13½ by 10½ by 4½ motor or some of its appended mechanism, it will be observed that an approximation to the long-sought perpetual motion has at length been achieved, since the process of recondensing the gas gives to it a supply of energy which was withdrawn previously by its expansion in the cylinders. This would constitute a marked improvement over the original proposition in connection with the use of carbonic acid gas, which was, to have the tanks charged at regular supply stations, very much as storage batteries now are charged for electric vehicle use.

Among other advances embodied in this contrivance, may be mentioned its economy of upkeep. Besides being so simple that a ten-year-old child can operate it successfully, it requires so small an amount of oil that it need not be lubricated oftener than once a month. In consequence of this and other factors, Mr. Carrol is credited with the estimate that "anyone owning one of these cars could take five or seven persons to Chicago for less than one dollar"—though it is not specifically stated whether such a journey would be from Philadelphia to Chicago, or from Evanston, Elgin, or some other less remote point.

Various Causes of Noisy Running.

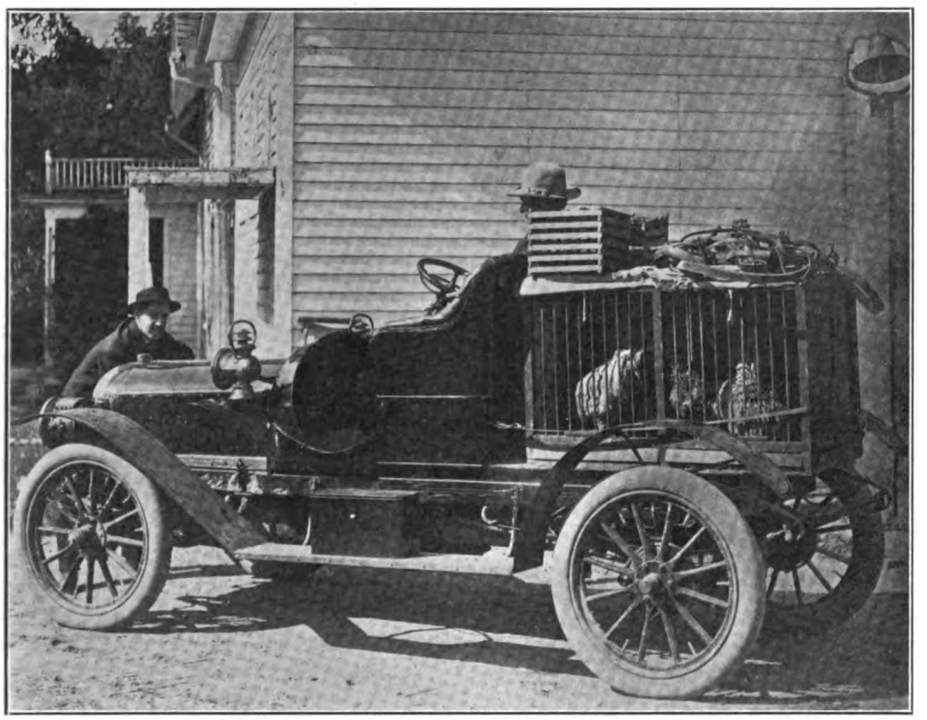
An occasional source of noisy running in a car which has seen considerable use is a leaky condition of the various joints in the manifold and exhaust piping. This may be due to one of several causes. The muffler supports may have become loosened sufficiently to permit a slight amount of play; disalignment in the piping also may have been set up. A third cause of difficulty may be due to the blowing out of the asbestos packing in the gaskets, while warped flanges in the couplings, a choked muffler or a kinked outlet pipe also may be responsible for the condition—which in any event, should be remedied at once.

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AUTOMOBILE AS A FARM WAGON

How One Progressive Farmer Makes His Pleasure Vehicle Useful—Finds It Saves Time and Expense.

Chickens, milk cans, bags of grain, tools, young trees, the purchases in town, and any number of other things go to make up the loads that the busy farmer's automobile is called upon to carry during the course of the day. That type of agriculturalist who combines enterprise and business sense with an ability to run a farm profitably is proving a great friend of the industry and a good customer. It is no longer merely the city dabbler in "gentleman farming"—whose products are scanty and whose milk costs him more than champagne—that affects the motor car, but the more practical money makers, who are alive and keen for everything that will help them in their business.



MODERN FARMER STARTING ON TRIP TO TOWN

In addition to the special types of machines that have been designed particularly for the farmers' trade, there are several of the more "cityfied" style which have found favor because of their generous carrying capacity, their reliable running and their low cost of upkeep. The accompanying illustration shows a Rambler car in actual service on a farm, where for some time it has been proving itself more than worth several teams. The big dinner bell in the picture testifies as to its being a real farm, and the load on the back was not put there by a press agent.

The owner of the farm and the machine, in addition to tilling the soil, is quite a horseman, both as a driver and a breeder. Nevertheless he does not permit any maudlin sentiment over the horse to interfere with his enjoyment of the economical advantages in time and money which the motor car offers him as a means of transportation around the farm itself and in trips to and from town.

Movement to Aid International Travel.

With the laudable object of determining means "to regulate and facilitate automobile traffic from one country to another," M. Pichon, foreign minister of France, has proposed the convocationof an internationai conference to be held in Paris, probably in October and in conjunction with the International Road Congress to be held at that time. The movement is said to have originated through M. Barthou, minister of public works, on whom falls the burden of providing the necessary permits to drivers, both domestic and foreign, and who has been constantly pestered with appeals to relent in the excessive use of official red tape in this respect.

Whatever may be the difficulty incident to the various registration laws of the different States of the Union in respect to interstate motor traffic, motorists touring abroad are subject to even greater vexations owing to the lack of uniformity of the regulations of different countries, and to the great amount of time which must be consumed in complying with the necessary formalities. Obviously, an agreement for the universal recognition of driving permits such as is contemplated would be a matter of such great convenience as to be worthy of whatever consideration it may receive.

NEARING A GREAT LEGAL BATTLE

Former Governor Briggs to Lead Attack on New Jersey's Oppressive Law—He Considers It Unconstitutional.

Former Governor John W. Griggs, of New Jersey, has been engaged as chief counsel in proceedings begun by the motorists of that State to test the validity of the motor vehicle law distinguished by the name of Senator Frelinghuysen, the New York member of the New Jersey legislature. Prof. Charles Thaddeus Terry, of the Columbia University Law School, who is counsel of the National Association of Automobile Manufacturers and chairman of the A. A. A. legislative board, will be associated with Mr. Griggs in the suit that will soon be brought to test the constitutionality of the New Jersey automobile law.

The fight against the oppressive law will be made under the joint auspices of the Associated Automobile Clubs of New Jersey, the State organization of motorists, and the New Jersey Automobile Trade Association, in which are included practically all of the automobile agents, tire accessory dealers and garage keepers of the State.

It is Mr. Griggs' opinion that the present New Jersey motor vehicle law is unconstitutional and he believes it will be set aside by the United States courts.

Division Threatened in New Jersey.

As a result of dissatisfaction growing out of the management of State and National affairs by the Associated Clubs of New Jersey—an organization which was formed as a federation of the motor clubs of the State—the New Jersey Automobile and Motor Club is considering the advisability of withdrawing from the State organization. The question of withdrawal will be definitely settled at a meeting of the trustees of the club to be held to-night (Thursday). It is understood that the contemplated withdrawal does not preface a severance of relations with the American Automobile Association, despite a press rumor that such a move is contemplated.

That the New Jersey Automobile and Motor Club has not taken a more prominent part in the Associated Clubs' doings before, it is learned, is because its officials wished to give the smaller clubs every representation possible.

The action of the Associated Clubs last week in retaining John W. Griggs, former Governor of New Jersey, to bring suit to test the constitutionality of the New Jersey law is regarded as futile by many members of the Newark club, which has stood for a policy of construction rather than destruction, and tends to favor the expending of effort and money on the preparation of a model law to be introduced in the legislature next year.

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PROBLEM OF THE WASTED ENERGY

Solution Made Difficult by Limited Size of Engine—Shortcomings of Varied Attempts to Reach It.

It is a safe assumption that no one who has given the matter much thought has failed to recognize the desirability of economizing a certain proportion of the energy which ordinarily goes to waste in the internal combustion motor. Knowing that the purpose of the engine is to convert heat into work, and observing the amount of heat which is lost in the radiator and through the exhaust, it is perfectly natural to wonder why it is that so much energy is lost, and why efforts are not made to utilize this great amount of actual and appreciable waste.

As a matter of fact, this subject has attracted inventors and engineers for many years, and as the result of their labors a large number of schemes have been proposed for utilizing the waste, or what is the same thing, gaining added power from the same amount of energy developed in the gas. Just why none of these schemes have come into practical fulfilment, is another matter. In general, however, it may be said, that for motors of low power and necessarily compact construction, such as those of the automobile type, the power gained by the form of "economizer" chosen, is mostly absorbed in the added friction of the extra parts necessary to develop it, while the remainder is not of sufficient magnitude to warrant the additional weight and cost of the parts involved.

Many such systems are very fascinating in theory, at least, and in some instances, if applied to large power plants, might work sufficient saving to warrant their use. For the small motor, however, practically none have yet proved available in the broadest sense.

While the internal combustion motor is recognized as the most economical form of heat engine yet produced, speaking entirely from the standpoint of thermal values, the fact remains that its sources of waste energy are so evident as to attract the attention of even the non-technical observer in a way to provoke no small amount of wonder that they have never been reduced to lower terms. Thus, where in the steam power plant, the losses of energy due to heat radiation are distributed over the entire plant, beginning with the fire box and ending with the exhaust steam piping, or, perhaps, with the condensing mechanism, in the gas engine, the radiation loss occurs entirely in the cylinder itself. Where in the steam engine, it is customary, at least in large plants, to condense the exhaust steam, thereby adding to the power of the engine, in the gas engine the amount of energy thrown to waste through the exhaust is well advertised by the noise and by the special means which must be taken in order to suppress it. Nearly every one who has ever come into contact with gas engines, probably has reflected on the magnitude of these two losses, and has attempted to devise means of reducing them, or if not that, finds it difficult to understand why such means are not applied more generally.

The inevitable reflection when the motor fails to develop the required amount of power is, why must all this heat and power be lost? Why not use some of it, if not all, exactly as it has already been used in the engine? This idea of using over the exhaust, that is to say, "compounding," is one which received considerable attention a few years ago, with the result that at least two types of compound engine were designed. One such is still upon the American market, and has been proved to be economical of fuel, and to afford a good ratio of weight to power output. In all fairness, however, it must be admitted that a four-cylinder motor of the ordinary type, developing the same amount of power, would be more economical to run in the sense of upkeep, because despite the fact that it possesses one more cylinder than the compound type, which, in the case in point is of the three-cylinder form, all the cylinders are of the same size, and therefore are perfectly interchangeable, with all their connecting parts. The more uniform torque of the quadruple, as contrasted with the triple type of motor, also tends to the same result. The saving in fuel which is brought about by compounding, is so small as to be negligible, when considered in dollars and cents, even though it has considerable significance when expressed in percentages.

From the direct use of the motor exhaust by taking advantage of its expansive force in the cylinder, it is an easy and natural step to a similar application of its energy in other ways. Working along this line, at least one inventor has attempted to apply the turbine principle, merely directing the exhaust into a casing containing a rotor of such form that it would absorb the energy from the waste gases, converting it into work, and simultaneously cooling them. The power output of the motor was to be added to in this way. Unfortunately for this scheme, the turbine principle is not understood sufficiently well, even yet, to make possible a really practical application for low powers. Furthermore, as the rate of speed of the simple turbine must be very high, in order to utilize power so developed, more or less elaborate systems of reduction gearing must be employed, which, with their added weight in the vehicle, and their added friction load on the machine, tend to reduce the effectiveness of the additional power secured.

A scheme which, other things being equal, should work to more purpose than this, was proposed a year or two ago when the idea of locating some sort of a thermo-pile in the muffler and taking advantage of the electric current it generated for ignition purposes, was broached. The thermo-pile, which is little known outside the laboratory, be it said, is a combination of metals arranged in layers of plates, alternately coupled together and so constituted that when subjected to changes of temperature, an electric current is generated. The temperature changes due to the successive discharges of hot exhaust gases and the intermediate period of cooling between them, were thought to be sufficient to generate a current which could be used for igniting the gas in the cylinders of the motor. Nothing further has been heard of this scheme.

Although a large proportion of the heat generated by the burning gas is lost through the exhaust, another very large amount is wasted through the cylinder walls, being carried off by the jacket water, in motors of the most familiar type. To so arrange the jackets and the circulation of the water that instead of merely heating the water, it should convert it into steam, the steam to be used in actuating a special cylinder or cylinders, is an idea which has lured more than one engineer. Within a short time, patents have been granted abroad on a system in which this very idea is put into effect—but in motors of large power and size only. While the heat obtainable in this way might be sufficient for the generation of ammonia gas or some other vapor which is given off at a relatively low temperature, it seems doubtful whether steam could be effectively generated in this way in sufficient quantities to be of real use in increasing the power of the main engine. Certainly from the standpoint of the automobile designer, the necessary apparatus would be too bulky to be of value.

From the standpoint of closest theory, it may be said that any methods such as the foregoing, which seek to utilize the waste from the engine, are not destined to be extremely successful except in the case of large machines, merely because they require additional "plant," and additional mechanism means additional weight and friction. The most effective way of cutting down losses, is in the engine itself, by permitting the gas to expand as much as possible before releasing it, perfecting the mechanical details of the apparatus so as to reduce friction, and arranging the cooling system so that the cylinders will be maintained at a uniform temperature under all circumstances.

Loose Bolts Mean Lost Motion.

It is important that the bolts securing the carburetter to the frame or the engine base be kept securely drawn up. Otherwise there is danger of an accession of lost motion sufficient to strain the connections of the intake pipe and cause them to leak. The result of this is that the mixture will be "upset," and the proper amount of suction cannot be obtained at the jet.

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The Week's Patents.

12,787.—Reissue.—Acetylene Generator. Richard H. Weles, Kenosha, Wis., assignor to The Badger Brass Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 19, 1904. Serial No. 233,540. Original No. 737,183, dated Aug. 25, 1903. Serial No. 130,537.

1. In an acetylene generator, the combination with a water chamber, of a generation chamber within and surrounded by said water chamber, a carbid receptacle within and wholly contained by said generation chamber, a water supply pipe extending across and through the upper end of said generation chamber and outside of the latter communicating freely with said water chamber, a water controlling valve communicating with said water supply pipe within the generation chamber and controlling and directing the flow of water therefrom to the underlying carbid receptacle, and a gas discharge pipe leading from said generation chamber, substantially as described.

886,506. Automobile. Henry K. Holsman, Chicago, Ill. Filed Feb. 8, 1907. Serial No. 356,393.

1. In an automobile, the combination with the running gears, of the steering wheel having its axle pivoted thereon, the body, and the steering wheel fender partly supported by the steering wheel and partly by the body so as to swing with the wheel.

886,508. Steering Device for Automobiles. Joseph Horat, LaFayette, Ind. Filed Oct. 22, 1907. Serial No. 398,622.

A steering device for automobiles and like vehicles comprising an operating shaft provided at one end with exteriorly located threads, a sleeve surrounding the threaded portion of said operating shaft and adapted to be actuated thereby, racks secured to both sides of said sleeve, toothed segments adapted to engage the racks, means for adjusting the racks towards and from the segments, means for securing said racks, a rock shaft actuated by the segments, and a housing to envelop said steering device.

886,519. Internal Combustion Engine James B. Knickerbocker, Indianapolis, Ind., assignor of one-half to Thomas A. Conlee, Indianapolis, Ind. Filed May 31, 1905. Serial No. 263,056.

1. In an internal combustion engine, the combination with a cylinder and piston, of an inlet valve leading into the cylinder, a jacket surrounding the cylinder, and a communicating passage between said jacket and the inlet valve, said jacket being provided with a plurality of inlet openings through which the air supply for the engine will be sucked, the area of the inlet valve being greater than the total area of the openings leading into the air jacket.

886,520. Automobile. Emil Koeb, Leipsic, Ohio. Filed April 24, 1907. Serial No. 369,919.

1. In an automobile, the combination with the main frame, an axle pivotally connected thereto, and ground wheels carried by said axle, of an auxiliary frame secured to said axle and having one end adapted to move in a vertical plane, driving mechanism carried by said auxiliary frame, and means for operatively connecting said driving mechanism to said ground wheels.

886,523. Spark Plug for Explosion Engines. Ellsworth A. La Har, Forestville, Conn., assignor to John B. Smith, New Britain, Conn. Filed Aug. 30, 1907. Serial No. 390,844.

1. A spark plug comprising a holding socket, having an internal seat, a tubular cap for said socket, an insulator complete in itself and a middle sleeve permanently connected with the said complete insulator, the said sleeve being fitted within the said socket and to the said seat therein for holding the insulator in the socket through the said sleeve.

886,526. Carburetter. Walter L. Marr, Jackson, Mich. Filed April 9, 1906. Serial No. 310,685.

1. In a carburetter, the combination with a float chamber, a float in said chamber, and means operated by the float for admitting liquid to said chamber, of an air chamber extending downward within the float chamber and closed at its lower end and open for the admission of air at its upper end, a nozzle member extending upward within the axis of the air chamber, a tubular member extending laterally from the air chamber and forming a passage adapted to lead to the engine cylinder, a member within the air chamber extending across the same and forming a continuation of said passage, a tubular mixing chamber formed integral with said last named member and extending downward within the air chamber, and means for regulating the admission of air to the air chamber.

886,527. Carburetter. Walter L. Marr, Jackson, Mich. Filed April 20, 1906. Serial No. 312,768.

1. In a carburetter, the combination with a float chamber, and a float in said chamber, of a gasolene chamber, a restricted passage connecting said float and gasolene chambers, a mixing chamber within the axis of the gasolene chamber, and a nozzle in the axis of the mixing chamber in free communication with the gasolene chamber.

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886,528. Motor Vehicle. Walter L. Marr, Jackson, Mich. Filed July 9, 1906. Serial No. 325,220.

1. The combination with the frame of a motor vehicle, of a motor supporting bed supported at one end upon the sides of said frame, means for pivotally supporting the opposite end of said bed to turn upon a horizontal axis extending longitudinally of the bed and yielding means at each side of said bed to resist its turning.

886,529. Explosion Motor. Armand Peugeot, Tony Huber, and Henri de Lostalot, Billancourt, France. Filed May 6, 1907. Serial No. 372,259.

An explosion motor of two-stroke cycle comprising in combination a cylinder, a widened portion formed at the lower end of said cylinder, an opening formed in the widened portion of the cylinder, an admission opening formed in the middle part of the cylinder, a conduit connecting the said opening, a third opening formed in the cylinder for the escape of the gases, a sliding cover closing the cylinder immediately above the point where the piston stops, a hollow piston, an extension formed on the piston adapted to be surrounded and consequently cooled by the admission gases, and an admission valve arranged just opposite the opening formed in the widened portion of the cylinder, substantially as described and for the purpose set forth.

886,545. Carburetter. George M. Schebler, Indianapolis, Ind. Filed May 27, 1907. Serial No. 375,964.

1. In a carburetter, the combination, with the casing, having an air passage, a fuel nozzle in communication with said passage, and a fuel valve co-operating with said nozzle, of an automatic spring controlled air valve, a movable member coacting with the said fuel valve for moving the same, intermediate connections between said movable member and the air valve, and means co-operating with said intermediate connections, whereby the effect of the said movable member upon the fuel valve is varied at various points in the stroke of said movable member.

886,617. Vehicle Shock Absorbing Apparatus. Ralph M. Lovejoy, Meredith, N. H. Filed March 28, 1907. Serial No. 365,149.

1. Vehicle shock absorbing apparatus comprising a liquid chamber, an imperforate partition therein movable relatively thereto, means for connecting one of the said parts to the vehicle running gear and the other to the vehicle body, a buffer chamber, a liquid passageway connecting the liquid and buffer chambers, a valve in said passageway, and means for controlling the closing movement of said valve by the relative movement of the liquid chamber and partition.

886,938. Steering Gear. Alanson P. Brush, Detroit, Mich. Filed Jan. 30, 1907. Serial No. 354,813.

1. A steering mechanism comprising a steering shaft, a driven shaft in line with the steering shaft, an internal gear carried by the driven shaft, an external gear in mesh with the internal gear, an eccentric mounted upon the steering shaft to actuate the external gear, and means to hold the external gear from turning on its axis to cause the relative velocities of the steering and driven shafts to vary.

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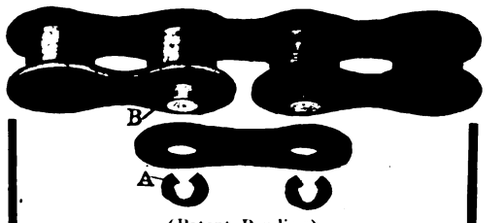
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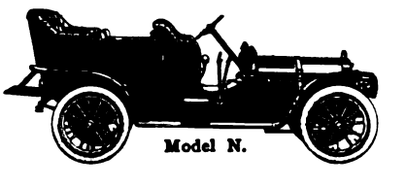
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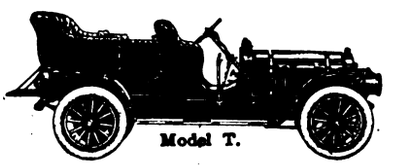
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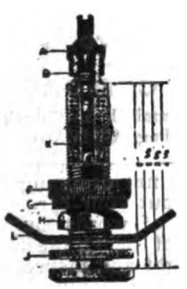
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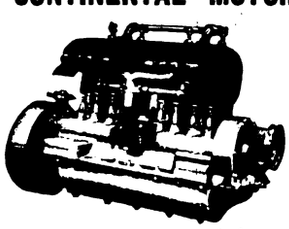
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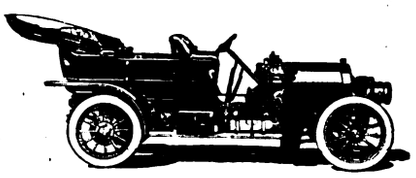


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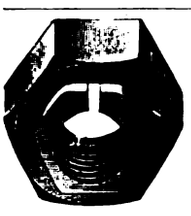
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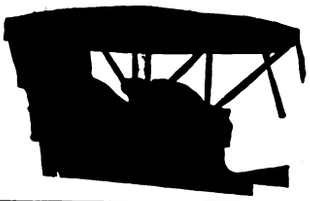




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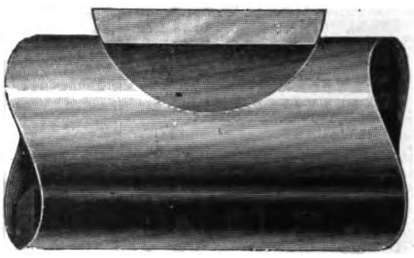
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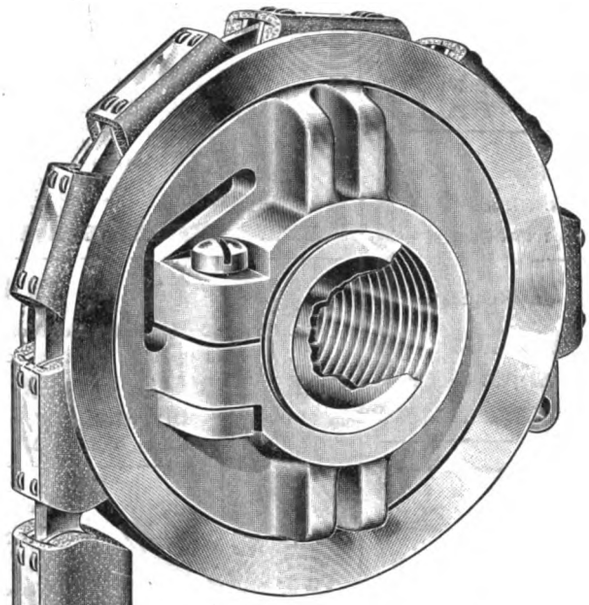
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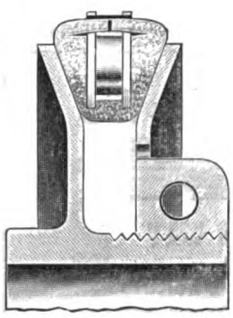
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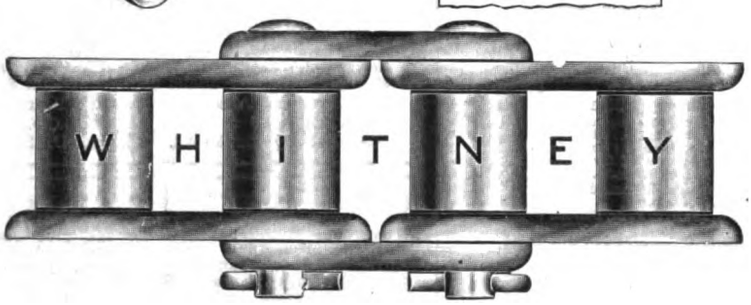






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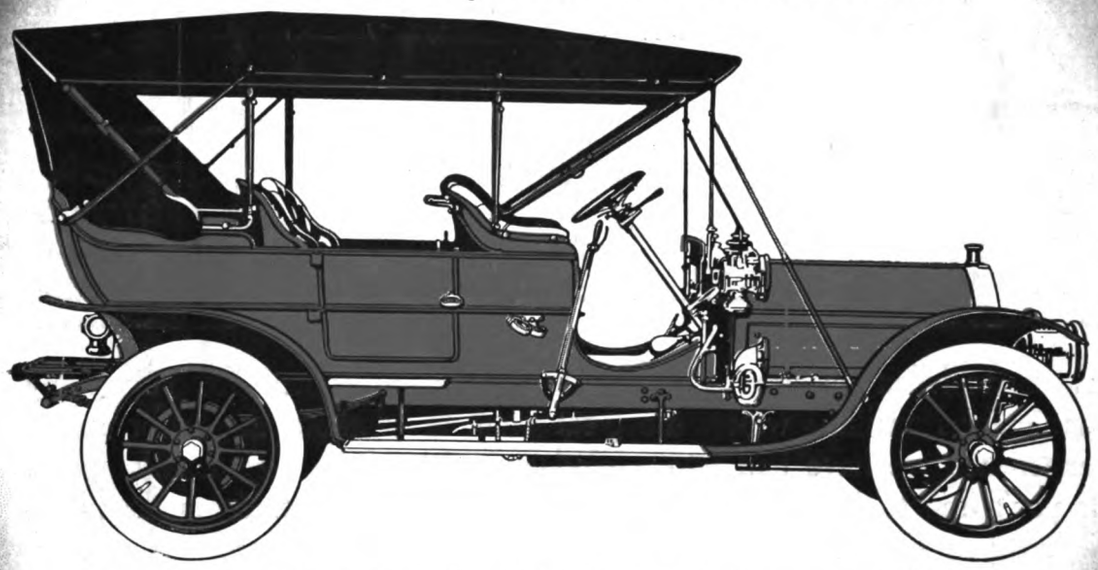
Volume XVIII New York, N. Y., U. S. A., July 23, 1908 Number 17

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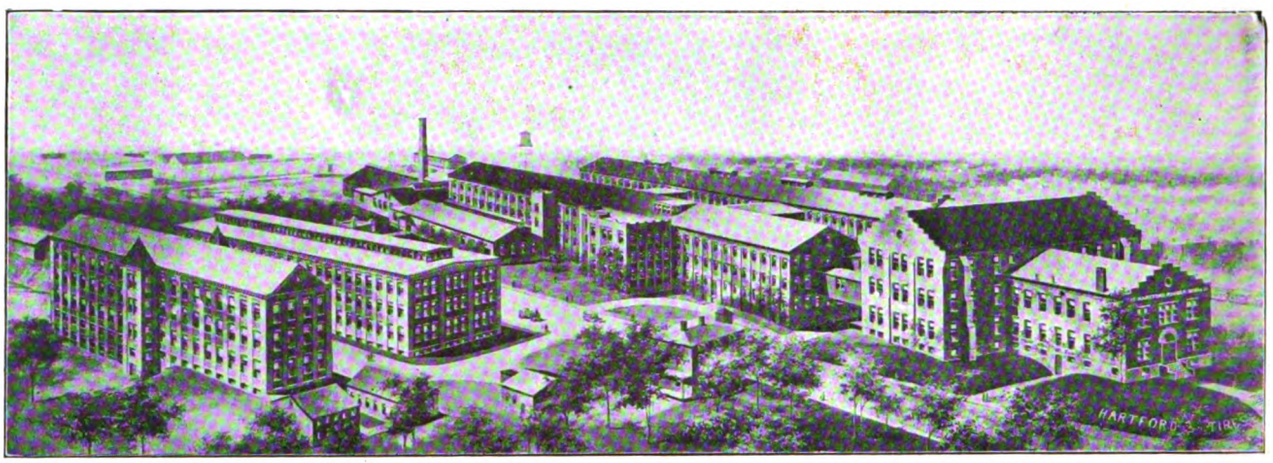
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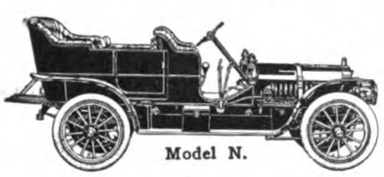
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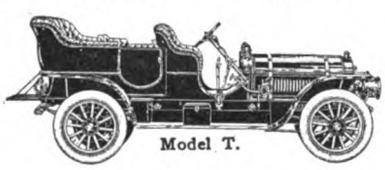
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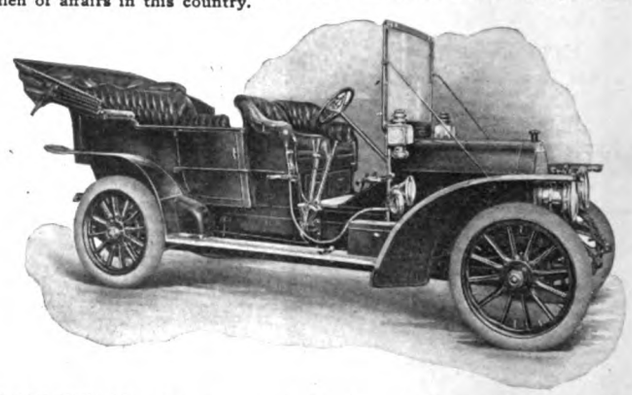
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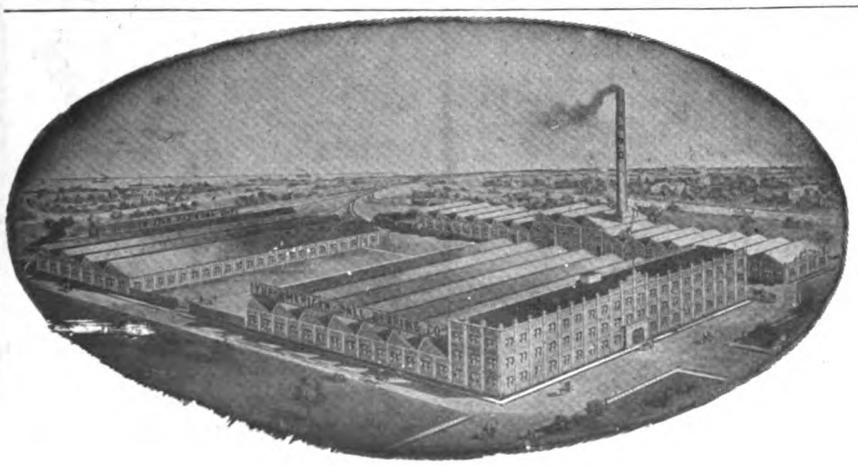
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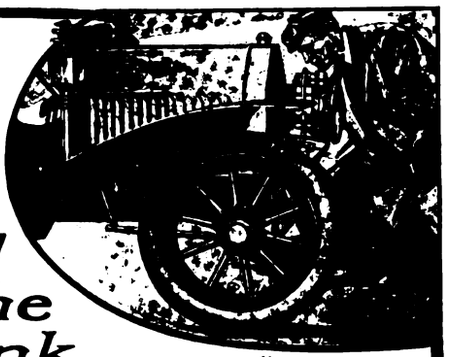
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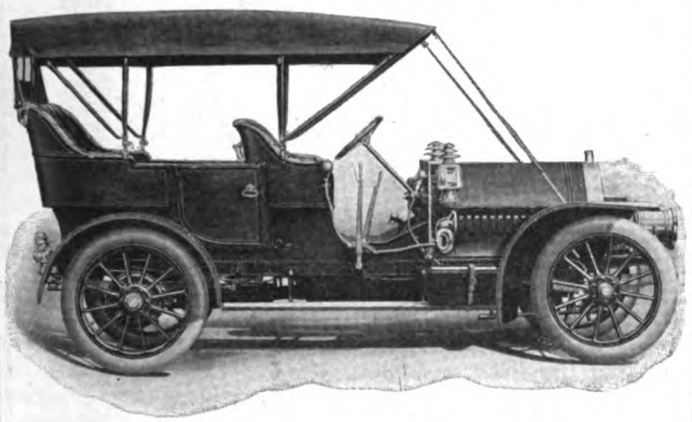
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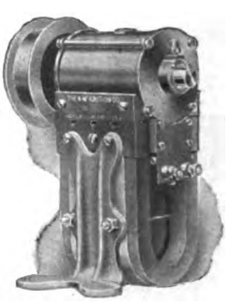
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THE K-W IGNITION COMPANY
38 Power Avenue, CLEVELAND, OHIO

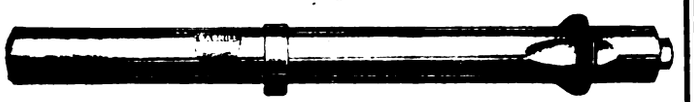
REPRESENTATIVES:
A. H. GREEN & CO., 1686 Broadway, New York.
W. J. FORBES, 220 Congress St., Boston, Mass.

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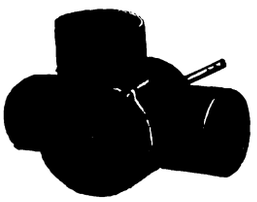
EVERY CAR that is equipped with

GABRIEL EXHAUST HORNS
GABRIEL CUT OUT VALVES and
GABRIE SHOCK ABSORBERS

has at least three points of excellence.



Gabriel Exhaust Horns produce every tone from p. p. to f. f, in either one note or organ effect at will and carry the sound farther than the ear splitting "just as goods."



Gabriel Cut Out Valves relieve the engine of back pressure so that all power goes to the wheels—they help wonderfully in speeding, hill climbing and over bad going.

Gabriel Shock Absorbers take up every shock that is too great for the springs. All three easily attached to any car. Write for catalog and prices.

Gabriel Horn Mfg. Co. 1417 East 40th Street CLEVELAND, OHIO

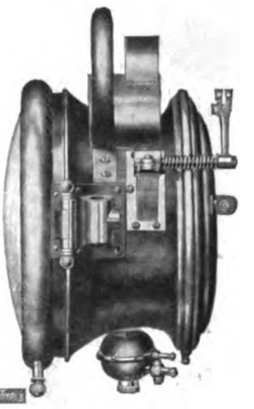
SOLARCLIPSE LAMPS

The Final Solution of the Lighting Problem is found in the

SOLARCLIPSE LAMP

This lamp throws two distinct rays—one of a far reaching, penetrating character, projecting a light over one thousand feet ahead, and the other a short focus ray which is thrown directly in front of the car.

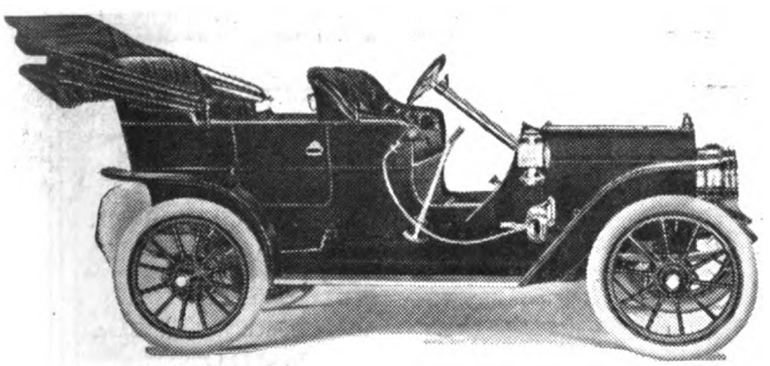
The driver is at all times in perfect control of the lights. Through the simple manipulation of a dash-board switch the long distance ray may be suppressed or thrown on at will. The SOLARCLIPSE has greater light giving qualities than any other lamp.



Complete description of the Solarclipse Lamp and Besnard System of Lighting in our 1908 catalogue. Sent free upon request.

BADGER BRASS MFG. COMPANY
606 Lyman Avenue, KENOSHA, WIS.

OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

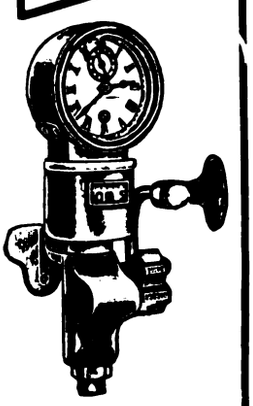
¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

Warner Auto-Meter

GUARANTEED FOR ONE YEAR.



"Thirty Days' Free Trial"

When a manufacturer is willing to send his product to anyone, anywhere, for 30 days—with no deposit, no agreement to buy, no promise to do anything except give that product a fair trial—he must have more than ordinary confidence in his article. In order for him to have that confidence he must have a most extraordinary product.

That's what we do. We'll send an Auto-Meter to any automobile owner in the country—with no deposit, no agreement, no promise to do anything but put it on his car and give it a fair trial. It doesn't matter whether he has another make of speed indicator already on the car or not. Indeed, for the sake of comparison, we hope he has. We will abide by the decision—for he will always keep the indicator that tells the truth. We claim for the Auto-Meter that it is the only one of which "the dial never lies." We believe that the instrument itself is the most eloquent salesman we have—we're willing to let it do our talking. Send to-day—just tell us what make and model of car you have—size of tires, etc.—and we will send you an Auto-Meter.

Is Right
Stays Right
Accurate At All Speeds

WARNER INSTRUMENT CO.
226 WHEELER AVENUE BELOIT, WISCONSIN

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SUPPLEMENTARY SPIRAL SPRINGS

If every driver had to ride in his own tonneau, every car would be quickly equipped with Supplementary Spiral Springs. Owners are not intentionally selfish—many of them just thoughtless. Usually driving or sitting beside the driver, the riding qualities of the tonneau are to them practically unknown.

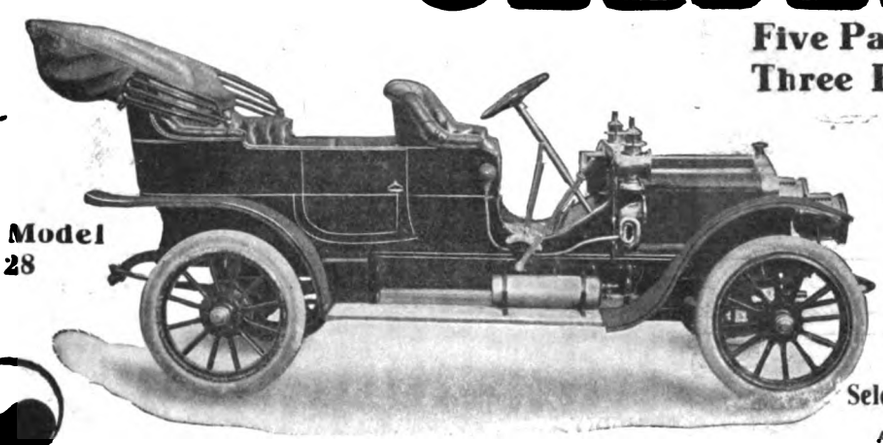
Not so with the passengers. Rear springs must be strong enough to resist severe shocks under a full load. That means stiff springs under ordinary loads, with the shocks and jars transmitted to the passengers—guests whose comfort ought to be a first consideration.

SUPPLEMENTARY SPIRAL SPRINGS take up all the average bumps and road inequalities and come into real action with the jolts and jars encountered at speed.

With the S. S. S., your springs never whip or touch. They prevent breakage and are the most economical and useful accessory ever provided for a car. Every live dealer carries them and their attachment is a matter of a few hours' time. Do it NOW.

Motor Mart, NEW YORK **SUPPLEMENTARY SPIRAL SPRING COMPANY** 4555 Delmar Ave. ST. LOUIS, MO.

THE SELDEN CAR



Model 28

Five Passenger Touring Car $2000
Three Passenger Runabout $2000

F. O. B. FACTORY

4 Cylinders, 30 H. P., 109" wheel base, metal body, pressed steel frame, beveled gear drive, three speeds selective.

A great hill climber, smooth running, ample power, light weight, well-made, fine finish and already known as the "Silent Selden" because it runs so noiselessly.

New York Office and Salesroom, 41 West 63d St.

AGENCIES—H. C. & C. D. Castle, Boston, Mass.; Selden Motor Car Co. of Providence, Providence, R. I.; Genesee Garage Co., Syracuse, N. Y.; Wm. C. Barry, Jr., 72 North Ave., Rochester, N. Y.; Walter Hayes, 1116 Main St., Buffalo, N. Y.; H. G. Welsh, Hutchinson, Kansas; Crowe-Graham Motor Car Co., Portland, Oregon.

Selden Motor Vehicle Company, Rochester, N.Y.
Members A. L. A. M.
Agencies Wanted in Unoccupied Territory.

THE OLDSMOBILE

is not only the **World's Best Car,** but one of its oldest and most famous.
It gives prestige to both owners and agents.

Model M	Model MR	Model Z
Touring Car, Fully Equipped,	"Flying Roadster," Fully Equipped,	6-Cylinder, 130-inch Wheel Base,
$2,750	$2,750	$4,200

OLDS MOTOR WORKS, Lansing, Mich., U. S. A.
Members A. L. A. M.

Canadian Trade supplied from Oldsmobile Co. of Canada, Toronto, Ontario.

TRENTON RUBBER MANUFACTURING COMPANY'S

THERMOID Brake Lining

WILL BE ON MOST CARS IN 1909—WHY? ASK THOSE WHO HAVE TESTED IT

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You *Can* Afford the $2000 Mitchell

—Afford to *buy* it because it is moderate in price.

We know you can afford to *keep* it, because we have many letters from users of Mitchell, testifying from actual daily experience, that it is the most economical car to *operate*. Before *you* buy a car, send for these letters and try a Mitchell in a 50 or 100-mile road test.

In demonstration, you'll notice not only that its style, finish and construction is equal to that of the extravagantly high priced cars, but that its *performance is too.*

Proof is easy, Mr. Business Man.

The Mitchell Agent will be glad to take you out at any time you say. Just call him up—no obligation on your part.

Try the $2000 Touring Car—the $2800 Limousine—the $1250 Roadster or the $1000 Runabout.

Get demonstrations of high priced cars and compare the Mitchell with them.

Call up the Mitchell Agent today and just say



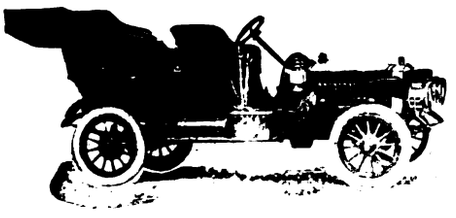
"Show Me"

The Mitchell Touring Car shown below is 35 H. P.—4-cylinder—speed, 50 miles—finish, Mitchell blue—price, $2000.

Write for Catalogue No. 18, describing the other Mitchell models.

Mitchell Motor Car Co., 284 Mitchell Street, Racine, Wis.

Standard Manufacturers, A. C. M. A.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Write for White Bulletin No. 15

The above illustration is reproduced from the new White Bulletin No. 15, an attractive little booklet devoted to some of the more important automobile events of the last few months. The leading articles are "The New Road Record Between San Francisco and Los Angeles," "The Fort George Hill Climb," "The Quaker City Reliability Contest" and "The Harrisburg Reliability Contest." In addition to these four detailed accounts of White victories, brief space is given to the numerous minor contests in which the White has carried off first honors; also, the activities of private owners of White cars and the doings of "Government White Steamers" in this and other countries receive attention. We believe that you will find this booklet of interest.

A POSTAL TO US BRINGS A COPY

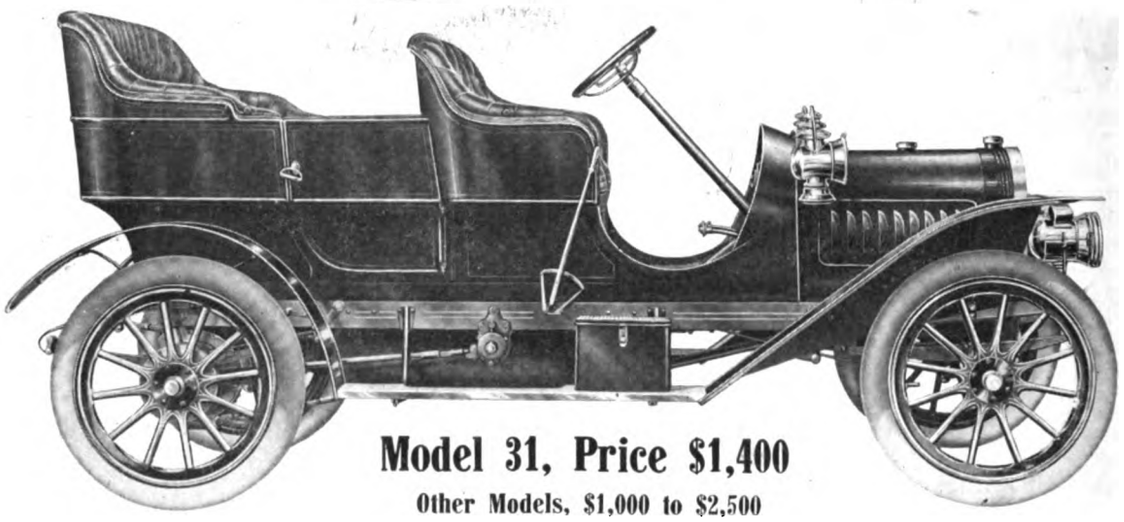
THE WHITE COMPANY

CLEVELAND, OHIO

PITTSBURG, 138-48 Beatty St. ATLANTA, 120-122 Marietta St.
SAN FRANCISCO, 1460 Market St. CLEVELAND, 407 Rockwell Ave.
NEW YORK CITY, Broadway at 62d St. BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St. CHICAGO, 240 Michigan Ave.

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Rambler



Model 31, Price $1,400

Other Models, $1,000 to $2,500

YOU can do all kinds of work with this car as a handy Runabout without the tonneau; then put the tonneau on and take your family or friends for a ride in a roomy Five-Passenger Touring Car.

Many exclusive features make it the most remarkable two-cylinder car in this country selling at $1,400.

The powerful engine makes it a hill climber; the long wheel and full elliptic springs provide great comfort; you glide over rough roads without a jar.

It is easy to care for and always clean because of the few moving parts and the enclosed power plant, impervious to dirt, mud and water, and oil tight with proper lubrication.

Immediate access to every working part is provided. The low cost of maintenance is due to simple construction, small fuel and oil consumption and protection of parts against injurious road material.

THE CAR OF STEADY SERVICE

A Postal will bring you the facts.

Please write your name and address and "Model 31" on a postal and mail to us today. You will not obligate yourself in the least

THOMAS B. JEFFERY & COMPANY, Main Office and Factory. **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee. Boston, Philadelphia, San Francisco

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, July 23, 1908. No. 17

SUES BANK FOR BUSINESS LOSSES

Allen-Kingston Wants $45,000 — Spent Money Advertising Cars That Were Never Delivered.

As a sequel to its relations with that troubled banker, promoter, sportsman, newspaper proprietor, automobile speeder, etc., E. Russell Thomas, the Allen-Kingston Motor Car Co. is suing in the New York Supreme Court for the return of $45,000 from the Consolidated National Bank and William O. Allison, Elverton R. Chapman and Thomas J. Lewis. The bill of complaint is such that the defendants made application to the court to have several of the allegations stricken out as scandalous, irrelevant and immaterial.

The trouble arises from the failure of the New York Car and Truck Co. to make and deliver cars to the Allen-Kingston Co., according to agreement. The Consolidated Bank and its officers, named as defendants, represented that the Truck company was a solvent concern, according to the complaint, instead of which it went into bankruptcy last March, leaving the Allen-Kingston Co. with its deliveries unfulfilled after the latter concern had spent considerable sums in advertising and salesmen's expenses.

An original contract, it is stated in the complaint, was made by Walter Allen on July 1, 1907, with the Kingston Motor Car Co., a Thomas property, for the delivery to Allen of 100 automobiles before April 15, 1908. Allen put up $15,850 as a deposit and then assigned his contract to the Allen-Kingston Motor Car Co., which was to sell the cars. The complaint says that E. Russell Thomas and Orlando F. Thomas gave Allen a guarantee at the start that the Kingston Motor Car Co. could deliver the goods, but that as it failed to do so beyond making six cars, it was proposed that the contract be turned over to the New York Car and Truck Co. for execution. Relying on the representations of the Consolidated Bank officials, the complaint recites, the plaintiff company and Allen agreed, on the distinct understanding that the bank was vouching for the financial responsibility of the Truck, company. The latter concern was paid $17,000 for the six cars already made, and $9,150 was added to Allen's original deposit of $15,850, making a total deposit of $25,000 that the Allen-Kingston Co. had up on deposit, the complaint states. It further says that various advertising and other expenses were incurred to the extent of $11,500.

It is the $25,000 deposit, the $11,500 expenses and $10,000 in damages that the Allen-Kingston Co. seeks to get from the Consolidated Bank. A drawback of $1,500 on the six machines delivered is conceded by the plaintiffs. The complaint alleges that instead of being solvent and able to carry out such a contract as it undertook, the New York Car and Truck Co. was heavily in debt both to the Consolidated Bank and to the Hudson Trust Co., of which the defendant Chapman was president. It is also alleged that the bank owned a big block of the stock and was trying to help the company out of its difficulties.

One Chicago Show May Suffice.

Since the recent return of S. A. Miles from Europe the Chicago show situation's troubled waters have had hurried and liberal treatments of smoothing oil, and such vistas of concession and compromise have been opened that the likelihood of an "independent" show by the American Motor Car Manufacturers' Association has diminished almost to the vanishing point. N. H. Van Sicklen has been endeavoring to obtain the management of the latter show, but Miles is showing the possibility of all interests being well served in the one big affair, thus doing away with the necessity for two Chicago shows at this time.

A special meeting of the National Association of Automobile Manufacturers to discuss methods of space allotment will be held on August 5, at which time an all-day session is scheduled. Its results will probably quiet the two-show project.

PROMISE PROFITS IN "BLUE CABS"

Immense Taxicab Stock Flotation Backed by Prominent Men—Big Dividends on Ten Dollar Shares.

Practically the first extensive public promotion of a taxicab company in the United States is about to be undertaken by the American Taxameter Cab Co., with a capitalization of $1,500,000, divided into $10 shares on which dividends of 30 per cent. are unqualifiedly promised prospective investors. The company has an imposing array of names prominent both in the automobile trade and in general business, including F. D. Underwood, president of the Erie Railroad; A. F. Rockwell, president of the New Departure Mfg. Co., of Bristol, Conn., and of the Bristol Engineering Co.; W. B. Hurlburt, president of the Garford Motor Car Co., of New York; George W. Sweeney, president of the Hotel Victoria Co., New York, the La Fayette Hotel Co., Buffalo, and the National Hotel Co., Rochester; E. M. Tierney, president of the Hotel Marlborough Co., New York; F. E. Moskovics, well known in the automobile trade; James B. Coryell, president of the Cambria Coal Mining Co., Philadelphia; L. H. French, of New York, and T. H. McInnerney, of Rochester. These men constitute the board of directors, while McInnerney is president, and French, the vice-president. Offices have been established at 31 Union Square, New York.

"Blue cabs" are to be operated in New York, Chicago, Philadelphia and Washington. The machines are of the four-cylinder landaulette variety, seating four persons inside and two outside, and equipped with radiators for interior heating in the winter time. In addition to the regular taximeter service from hotels, restaurants, theaters, railway stations and the like, the company anticipates a large business from "the equipment of a number of chassis with special bodies, having the appearance of pri-

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vate cars, to be rented to private parties by the week, month or season."

"It is the company's intention," the prospective investor is informed, "to declare no more than 30 per cent. dividend on the stock at the end of the first year's operations. Although the earnings of the company are expected to be sufficient to warrant a much greater amount, it is deemed wise to maintain a large surplus for the purchase of additional equipment. There could be no safer investment. The cabs earn as soon as in commission. The management of the company is in the hands of practical business men of long experience in this business. The element of chance is entirely eliminated."

The intending stock purchaser is advised that the cab is operated "at very small expense and the comparatively low tariff charged produces surprisingly large profits." The present taxicab service in New York is declared to be "wholly inadequate to the demand and in other large American cities no effort has been made to install such service. In New York City there are only two companies operating gasolene cabs for public hire on a large scale. Their profits are enormous and no stock in either company is for sale. American capital is at present invested in taximeter service in European cities, drawing phenomenal dividends, even though the tariffs are much lower and the number of cabs many times greater than here."

Original economies in equipment are promised by the fact that the company is to use cabs of American manufacture, thus avoiding the necessity for paying the 45 per cent. import duty that is imposed on the foreign cabs and parts such as the other companies use.

Elaborate tables of figures are presented to show on what calculations the expectation of steady 30 per cent. dividends is based. According to the data obtained, the cabs average 51 miles a day, with 2½ hours waiting time chargeable to patrons, giving an average gross receipt of $27 a day. Each cab need only earn $4.55 per day, gross, it is estimated, in order to pay all the fixed charges and expenses, to put aside 25 per cent. for depreciation on equipment, and to pay chauffeurs' percentage. "All earnings in excess of this amount are available for distribution as dividends," which on the $27 per day basis will yield 149 per cent. profit.

The plan of operation would be an investment of $800,000 in 400 cabs; $30,000 in garage and shop equipment; and $40,000 in repair parts. The annual fixed charges for operating expenses are set at $248,560 and the annual depreciation of 25 per cent. on the cabs themselves at $200,000, making a total of $448,560. The tire cost is figured on a contract basis of 2 cents per mile for 4 tires, by special arrangement with a tire company, so that no heavy investment in tires is involved. Following the usual taxicab practice, each chauffeur would furnish gasolene for his cab at his own expense, and would receive 20 per cent. of its gross earnings instead of wages. The operating expenses would include advertising, garage leases, oil, repair parts, shop equipment, all help, supplies, insurance, the bonding of chauffeurs, license fees for cabs and drivers, and an ample provision for incidental expenses.

It is assumed by the promoters that 360 cabs, or 90 per cent. of the entire equipment, would be in constant commission, and the earning "possibilities" are presented in tabulations on an ascending scale, "beginning with the lowest probable amount per day which each cab might earn."

These tabulations are as follows:

With gross earnings of $8 each, per day, 360 cabs earn, per year	$1,051,200	
Tire charge on this basis	$26,280	
All other expenses, including depreciation	448,560	
Chauffeurs' percentage (20%)	210,240	685,080
Available for dividends		$366,120 or 24%
With gross earnings of $10 each, per day. 360 cabs earn per year	$1,314,000	
All fixed charges and expenses	777,060	
Available for dividends		$536,940 or 35%
With gross earnings of $12 each, per day. 360 cabs earn per year	$1,576,800	
All fixed charges and expenses	842,760	
Available for dividends		$734,040 or 48%
With gross earnings of $16 each, per day. 360 cabs earn, per year	$2,102,400	
All fixed charges and expenses	974,160	
Available for dividends		$1,128,240 or 73%
With gross earnings of $20 each, per day. 360 cabs earn, per year	$2,628,000	
All fixed charges and expenses	1,105,560	
Available for dividends		$1,522,440 or 100%
With gross earnings of $27 each, per day. 360 cabs earn, per year	$3,547,800	
All fixed charges and expenses	1,302,660	
Available for dividends		$2,245,140 or 149%

The figures are given as being based upon actual earnings "not only of other companies now in operation, but upon an actual four months' test made during March, April, May and June, 1908, with ten cabs." Five year contracts at prominent stands are said to be all arranged for. A further field for the company's activity is promised in the commercial field, in the establishing of a motor delivery system for retail stores. It is explained that "the company has already been approached by, and can at any time make contracts with, several of the largest New York stores for the delivering of goods. This department will be very profitable and will be a part of the present company."

The manufacture of the motors and parts has been given to the New Departure Manufacturing Co., of Bristol, Conn., and the latter concern is already busy at work on them.

To Make Taxicabs at Geneva Plant.

With a clear view of the field, another taxicab manufacturing concern has entered the lists, its name being the Cleveland Auto Cab Co., of Cleveland and Geneva, Ohio. The company has been incorporated with $150,000 capital, under Ohio laws, and has purchased the plant formerly owned by the Geneva Automobile Co., where the Geneva steam cars were at one time made. While the factory will thus be in Geneva, the general offices will be located at No. 318 The Garfield Building, in Cleveland. Actual work on the taxicabs will commence before long.

The officers of the company include G. W. Alden, president; L. E. Wing, vice-president and treasurer; and W. C. Lytle, secretary. While New York capital is chiefly represented, some local capital is also interested and S. D. Wetmore, mayor of Geneva, is among the directors.

Lamp Committee Reports on Prices.

Buffalo was the scene of a further meeting of the lamp makers on Tuesday of this week. A special committee of the M. A. M., which was appointed at the last meeting and which consisted of George Yule, F. E. Castle and E. J. Edmunds, reported to the lamp making membership their recommendations on uniform discounts to apply to the manufacturing, jobbing and retail trade. The recommendations have not as yet been decided upon for general adoption, although action is expected to be taken in the not distant future.

Gets License Separate from Thomas.

The Chalmers-Detroit Motor Co., which hitherto has been operating under the license of the E. R. Thomas Motor Co., of Buffalo, of which it was a part, was admitted to membership in the Association of Licensed Automobile Manufacturers on July 17, thus becoming a recognized independent entity. According to a statement issued by the Licensed Association, it is expected that the "policy of strengthening and enlarging the Association is only begun" in the admittance of the Chalmers-Detroit Co.

Allen Crossing the Atlantic.

Walter Allen, who has obtained control of the import of the Mercedes, sailed this week for a brief European trip. His visit abroad largely relates to arrangements for the coming year.

The Jonz Automobile Co. has commenced operations in Beatrice, Neb. The factory is now at work on a number of cars for the coming season.

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PRESIDENT DALE DIES SUDDENLY

Was Head of the Rubber Company Controlling Prominent Tire Concerns—His Rise and Career.

Charles H. Dale, president of the Rubber Goods Mfg. Co., died suddenly of heart disease at his summer home at Larchmont, N. Y., on Saturday morning last, at the age of 56 years. He has been ailing for several weeks, but a serious outcome was not anticipated, and the end came as a severe shock to his many friends.

Funeral services were held at Larchmont on Monday afternoon, and were attended by the executive officers of all the companies affiliated with the Rubber Goods Mfg. Co., and the directors of the United States Rubber Co. As a mark of respect, the different plants and branches of the Hartford Rubber Works, Morgan & Wright, and the G & J Tire Co. throughout the country, were closed during the entire day, and on Tuesday from 10.30 a. m. to 1 p. m., when the interment, which was private, took place.

In addition to being president of the Rubber Goods Mfg. Co., Mr. Dale was a director of the United States Rubber Co., the Merchants Exchange National Bank, and the Century Bank; and was a member of the Union League Club, New York Yacht Club, Larchmont Yacht Club, Automobile Club of America, and the New York Athletic Club.

In both business and private life Mr. Dale was an attractive personality, and was easily approached. He took more than a passing interest in the employes of the various companies under his control and placed implicit confidence in them. His associates revered and honored him as a man and friend, and many felt the influence of his disposition to help those around him.

His own career was an example of enterprise rising to success. After being graduated from the Cheshire Academy, Cheshire, Conn., he immediately started to carve out his own fortune. He went West and became interested in mining. About 30 years ago he went into the employ of the West Shore Railroad Co. and was in charge of the first passenger train over that line from New York City. After railroading for a number of years, he was attracted to the rubber trade and accepted a position with the Peerless Rubber Mfg. Co., taking charge of its railroad department. Finally, with several others, he purchased a controlling interest in the concern, which later was disposed of to the Rubber Goods Mfg. Co. Under his management as president, the Peerless company had become one of the largest and most profitable manufacturers of mechanical rubber goods in this country.

Succeeding Charles R. Flint, he became president of the Rubber Goods Mfg. Co., in this position becoming identified with the automobile and bicycle tire industries. He instigated the building of the new Morgan & Wright plant at Detroit, Mich., and practically reorganized all of the tire factories connected with the Rubber Goods Mfg. Co., these, in addition to Morgan & Wright, including the Hartford Rubber Works Co. and the G & J Tire Co.

Briscoe Entertains Maxwell Agents.

The branch managers of the Maxwell-Briscoe Motor Co. gathered at the main office in Tarrytown, N. Y., last week for their annual convention. Monday's program consisted of reports and discussions on business conditions throughout the country and an examination of the cars which constitute the offerings for the coming season. Tuesday was started with a "rubberneck" tour of New York City and in the evening Benjamin Briscoe gave the guests a banquet at the Cafe "Mar-tan," as the French proprietors insist "Martin" should be pronounced. After the banquet Briscoe disclosed part of a new automobile selling plan which is designed to be of great assistance to the agents.

Magneto Orders Crowd New Plant.

Magneto orders for the coming season are already testing the capacity of the new plant of the Remy Electric Co.'s plant, at Anderson, Ind. In addition to handling what is believed to be the largest single order for magnetos ever placed, that of the Buick Motor Co., the company has also on hand an order from the Overland Automobile Co., of Indianapolis, for 1,500 magnetos, together with several other large entire equipment orders.

Three Makers Join "Independents."

Two makers of buggyabouts, the Holsman Automobile Co., of Chicago, and the W. H. Kiblinger Co., of Auburn, Ind., have been added to the membership of the American Motor Car Manufacturers' Association. At the same time another member was likewise added, in the Midland Motor Co., of Moline, Ill., whose car is a product of the factory that formerly made the Deere-Clark.

Reeves Reappears at His Office.

Manager "Al" Reeves, of the American Motor Car Manufacturers Association, has so far recovered from his appendicitis operation as to appear at his office. A visit to Saratoga, N. Y., incidental to seeing the Glidden tour finish will break the force of his getting directly into harness again for serious business.

Butcher Takes Timken Territory.

H. E. Butcher, who until recently was at the head of H. E. Butcher & Co., manufacturers' agents at Detroit, Mich., has joined the forces of the Timken Roller Bearing Axle Co., of Canton, O. He will act as a traveling salesman for the company's products.

PERMITS TRANSFER OF POPE CASH

Connecticut Court Allows Receivers Money to Pay Creditors' Dividend—Reorganization is Expected Shortly.

Following the orders of the New Jersey court authorizing the receivers of the Pope Mfg. Co. to pay another or second dividend of 25 per cent. on all the approved claims, a hearing was held before Judge Howard J. Curtis in the superior court at Hartford, Conn., on Tuesday of this week on the motion to permit the receivers to transfer the necessary money to the control of the New Jersey court, in order that the payment may be made.

The lawyers for the receivers asked for permission to transfer $380,000. The receivers in Connecticut have $628,791.97 on hand, which together with all the money that they hold, a part of which will have to go to other jurisdictions, gives them a total of $1,378,000. Opposition was presented to the granting of the order for the transfer, but a compromise was finally reached whereby $300,000 is to be given over to the jurisdiction of the receivers in New Jersey.

Judge Curtis also passed an order giving the Connecticut receivers permission to carry on the business for four months from August 28. A complete reorganization of the company is expected to take place before that time, according to Arthur L. Shipman, one of the attorneys for the receivers.

Mitchell Agents' Midsummer Meet.

A "make merry" meeting of Mitchell agents at the factory in Racine, Wis., will be held August 27, 28 and 29, at which time the 1909 models will be shown and demonstrated. Agents from all parts of the country are expected and about 50 of the new cars will be ready for their inspection.

Have Stoddard-Dayton Date at Dayton.

Agents of the Stoddard-Dayton will foregather at Dayton, O., on July 29th, for a four days conclave at the factory of the Dayton Motor Car Co. The models for the coming season will be shown and the reasons for Stoddard-Dayton enthusiasm made clear.

Rapid Building a Big Addition.

Large additions to the factory of the Rapid Motor Vehicle Co., at Pontiac, Mich., have been started. A reinforced concrete building, 300 by 60 feet, is under way. This will make the sixth enlargement of the plant since it started three years ago.

The Michelin Tire Co.'s factory at Milltown, N. J., has for the last five months been running 24 hours a day. Present conditions indicate no relaxation in the necessity for night work.

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The Great Efficiency Run

Introducing the Model B

BRUSH RUNABOUT

DETROIT TO
1—Boston via New York.
2—Washington via Pittsburg and Philadelphia.
3—Kansas City via Cincinnati and St. Louis.
4—Minneapolis via Indianapolis and Chicago.
5—Chicago and Return in Delivery Car.
COVERING 14 STATES

Anticipating a considerable increase in our production (now 8 to 10 per day), we will, on the appearance of our Model B car this week, send four runabouts and one delivery car over the above routes in order to show this wonderful little car to all sections. With the detours necessary to cover good towns and agency points, the first four routes will be over 1,500 miles each, and the fifth about 750. No particular speed is required, though with the stops for demonstrations it will be necessary to move lively to complete the run in two weeks.

A silver cup and cash prize will be given to the driver who uses the least gasolene and oil per mile, and a complete record will be kept by the observers of all repairs and adjustments.

Observers have been selected among newspaper men. They will carry keys to the tanks and otherwise be given facilities for accurate checking of the performance. At the end of the tours an illustrated booklet will be issued giving exact data.

In connection with the tour the good roads movement will be pushed and good roads literature distributed. The Michigan State Highway Commissioner, the Hon. Horatio Earle, a notable advocate of good roads, will assist us in this feature, and we expect similar help elsewhere.

Mr. Fred Nash, the famous cartoonist and writer, will have charge of the publicity end of the tour and illustrate it with humorous sketches.

Many people have asked us

Why We Do Not Run in the Glidden Tour

Simply because this run will do us more good for money expended, as we can stop and demonstrate; because it covers over 400 good towns in the bulk of the good buying territory; because while run under normal touring conditions it is a more severe test than the Glidden tour, as no attempt is made to find good roads; because it will give the average performance of five regular stock cars instead of one specially prepared; because more people will see it and have time to look at it and it will thus benefit more of our dealers than scurrying along in a cloud of dust with a hundred other cars.

Announcements of the progress of the run will appear in such issues of the trade papers as appear during its continuance, and daily bulletins will be mailed to a list of those interested. Write us if you wish to be on this list.

The Model B Brush Runabout is a wonderful car. Wonderful in efficiency, in economy, in durability, in convenience. The price remains the same, $500 with solid tires, $550 with pneumatics, and $600 for the delivery wagon.

BRUSH RUNABOUT CO., Detroit, Michigan

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JULY 23, 1908.

A Question of Safety.

It is noteworthy that the main purpose of the improvements in motor car construction which are now taking place is in the line of increasing the durability and safety of the machine. The problem of producing a motor of adequate power to propel a car of given weight, or of designing a transmission to carry that power through to the driving wheels, no longer is a momentous task of itself. It is the production and adaptation of materials capable of resisting extraordinary conditions, and without the accumulation of excessive weight, which most concerns the designer at the present time. Yet in the movement for increased safety in motoring, which is the real intent of this effort, it is curious to reflect that in that most perilous danger center, the gasolene tank, the use of so soft and ductile a metal as copper still continues, with rare exceptions. That no more serious consequences attend its general use under a wide variety of conditions, is equally to be wondered at considering the arduousness of the duty thrown upon it.

Despite the effect of new methods of staying and suspending the fuel tanks, the fact remains that the number of collisions or smashes which are accompanied by the incidental destruction of the tank, is too great to pass without notice. Generally speaking, this incident is followed by the burning up of the wreck—a thing which might have been avoided were the fuel tank made of stronger metal and provided with an emergency valve to seal its contents automatically at such a time. In the case of tanks mounted in the rear of the car, and therefore open to the effects of the ever imminent rear-end colision, the danger of using thin and soft metal is increased. The enclosed tank, placed under the front seat, usually is protected except when the car is overturned or the forepart of the body is smashed. The rear, underhung tank, however, remains exposed at the risk of carelessly driven following vehicles, flying stones, and high obstructions in the center of the road.

That it is perfectly possible to use galvanized iron, or iron otherwise coated to guard against corrosion and the effects of the gasolene, as indeed is done in one or two instances, makes it appear all the more remarkable that the subject has not been given more serious attention by the makers hitherto. Obviously its cost should not act as a deterrent, nor the question of the added weight of the stronger tank. It is true that flanged couplings would be required in place of soldered-on connections, and that the method of fixture to the chassis would have to be such that no weaving or lost motion could occur in the tank. This ought not to be difficult to accomplish, however, and it is not easy to see why the matter has been permitted to pass without comment, for so long a time.

An Unsettled Controversy.

It is somewhat surprising to note the almost complete cessation of the "battle of the cylinders," in regard to the relative merits of combinations of fours and sixes, which at one time, not so long since, threatened to move the industry to its very depths. Contrary to what might have been expected from the preliminary skirmish, there are no present indications that the close of the year will see complete victory. There is every reason to suppose, in fact, that makers who now are devoting themselves exclusively, or to a large extent, to the production of sextuple engined machines, like those who have stuck to the quadruple type, will continue to build models of a similar nature. Furthermore, it appears that the question as to the relative merits of the two types is fast losing interest for the owners as a class.

It is pretty generally admitted that both parties to the controversy have been forced to make concessions during the interval since the six-cylinder motor came into a position of real comparative merit with the four cylinder type. The question as to which of the types is best suited to the work of propulsion, is now recognized as being not one of power, nor, in general of cost, but of comparative smoothness of operation, particularly when propelling the car at low or moderate speeds and on high gear. Matters of cost of production, maintenance and operation, have been found to equalize more closely than had been anticipated, when comparison is based on general uniformity of design and an equal power output. In consequence, it is reasonable to suppose that in his growing appreciation of actual running ability in the complete car, and his recognition of his own impotence in determining its specifications, the average owner is inclining toward a position in which he will leave all questions of pure design to the manufacturer.

On this supposition, the question is destined to continue to be rather more of commercial and technical interest to men in the trade and designers, than to the motoring public. Consequently it may be supposed that those makers who have "gone into" six cylinder construction after thorough experimentation on an original basis and have succeeded in producing motors which are without serious defect, will continue to produce them until such time as more complete developments in the art of gas engine design shall have revealed really striking points of advantage for one or the other of the two types. Similarly, those who have succeeded in developing four-cylinder motors which are not open to criticism at present, will probably adhere to their present policy. It is those makers who have placed themselves in the equivocal position of building two types of motor of practically equivalent power, but of the two sorts, who will feel the need of making a permanent decision in favor of one or the other, since economy of production demands the elimination from the product of all variety that it may be possible to

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accomplish without reducing its scope.

It is observable that the double-opposed motor has been granted a regularly established status in cars of a certain class—light, economical, relatively small. That ultimately a similar classification embracing motors of medium power of the four-cylinder type, and of high power, of the six-cylinder type may come to be established, for good and sufficient reasons, would be a logical conclusion, more or less upheld by an apparent trend at the present time.

The Endorsement of the Trade.

Whether it be held as a matter of nice discrimination that the manufacturers of automobiles are not entitled to a hand in the control of what is purely the sport of automobile competition, or whether the opposite view be taken in the matter, the action of the National Association of Automobile Manufacturers in upholding the standard of the American Automobile Association in its governmental capacity cannot fail to have a clarifying effect on a situation which was in danger of becoming needlessly complicated. It may be assumed that the A. A. A. might have been able to establish proper relations with other recognized bodies abroad without any action from outside sources which might be construed as needless interference. At the same time, it is almost certain that the foreign associations, which are uniformly under the sway of trade influence, will be deeply impressed with the endorsement presented them, and that its effect will be to hasten a settlement of their present misunderstanding. Incidentally, the action serves to emphasize the untenable attitude of the Automobile Club of America, of New York, and serves as an interesting comment on the futility of its hope to attain the mastery of the automobilists of America.

Prospects of the Motor Stage.

That the motor stage is "making good" in various localities is a matter of no question, though its development has not been attended with the eminent success that at one time was predicted for it. In many localities, it has been found a more or less expensive luxury, though perhaps, not necessarily so. In others, particularly where long hauls are the rule, it has attained a prominence which speaks volumes for the certainty and despatch of its service. This is particularly true of instances of its use in the extreme West, where questions of operating cost, like those of tariffs, are subordinated to considerations of schedule. That it is destined ultimately to become of no small importance in feeder work, both within corporate limits and on the fringes of civilization, is an old conclusion which is fully endorsed by present experience.

The use of motor cars for commercial purposes has not progressed to such a degree that a proper conception of its business side has been developed. The enthusiastic promoter, however good his intentions, often lacks the knowledge and experience required for a fair handling of the equipment. This alone stands in the way of a successful employment of motor stages in many instances where, other things being equal, prospects are good for a profitable outlay of capital.

The rate at which enterprises of this nature are multiplying in the western States is really surprising. It speaks volumes for the faith which the performance of the pleasure car has inspired, and for the extension of business which is promised in the future. But that increased popularity, more especially in the line of passenger-carrying vehicles, can be brought about only by the exercise of proper discretion among the manufacturers and their agents, in placing machines under conditions where careful and rational treatment is assured to them, at least so far as this may be possible.

How to Develop Exports.

It is not a particularly inspiring outlook for the business of automobile exportation to Ceylon which is presented by American Consul E. A. Creevy, of Colombo. It is the old story. Roads are bad, hills steep, fuel costs high, and the possible buyers not yet alive to their needs in this respect. At the same time his message serves a useful purpose first, in showing that a definite opening for motor cars exists, and how the land lies, and second, because it points the way to successful exploitation. The principle of personal representation on the ground is one which has been shown to be desirable, if not absolutely necessary, in several other instances of a similar nature. Long-distance selling methods in which catalogues printed in a foreign language figure most conspicuously, and in which are shown no appreciation of local conditions, are not destined to be crowned with success. Whether the export trade is to be fostered throughout the field, in specially favorable localities only, or not at all—is for the makers to decide. The fact remains that the situation cannot be handled at arm's length, as has been proved in the case of the few concerns who are really advancing in this line.

COMING EVENTS

July 25, Philadelphia, Pa.—Norristown Automobile Club's race meet at Point Breeze track.

July 26-26, San Francisco, Cal.—Automobile Dealers' Association's reliability run to Del Monte.

July 29, Des Moines, Iowa—Iowa Automobile Club's race meet at Fair Grounds track.

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

Sept. 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7, Lowell, Mass.—Lowell Automobile Club's road race at Pawtucketville, Mass.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

Value of a Legalized Monopoly.

No man can estimate the intrinsic value of the aggregate of patent holdings to the business world. Similarly it is impossible to estimate the amount of money which has been sunk in patents and to no purpose. But despite the great price which is paid for the exclusive right to use an invention or the product of an invention, it is an open question how much actual return is gained on patent investments, in the general sense. The cynical phrase, "a patent is merely a license for litigation," recurs with haunting persistency. A question even suggests itself at times as to whether it pays to recognize the validity of patents except when compelled to do so, or to seek protection in such a way, when its enforcement means, perhaps a greater loss than would be sustained at the hands of open and unfettered competition. The sophistry of the idea, however, is plainly revealed when it is considered what strange chaos would be produced to-day, were the patent laws suddenly nullified, and all their monopolies coincidently rendered void.

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HOWER FAILS AS A BREAKER OF TIES

Glidden Tour Marked by Surprisingly Few Penalizations Despite Strenuous Route and Drastic Rulings—Three Teams Enter on Last Stage Unpenalized—Many Perfect Individual Scores—Of 46 Who Began the Long Journey Only 12 Dropped Out of the Running.

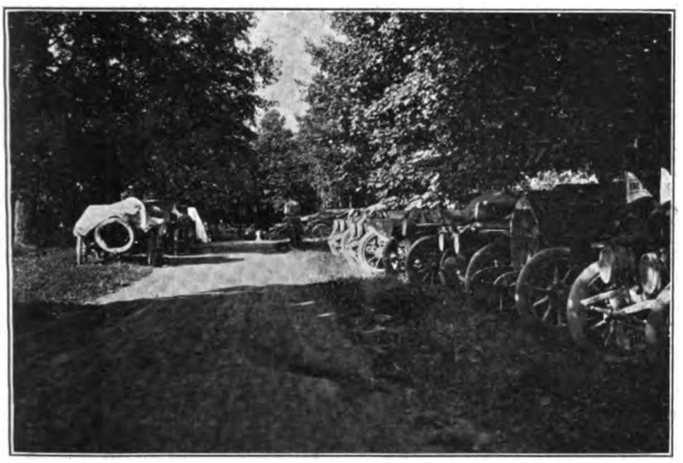
At the start of the last day's run, the three perfect score teams competing for the Glidden Trophy are the Pierce Team, of the Buffalo Club; the Peerless Team, of the Columbus Club; and the Chicago Team, consisting of two Haynes cars and an Oldsmobile.

In the Hower Trophy contest for runabouts the perfect score cars are the two Pierce Arrows, two Stoddard-Daytons, and a Premier.

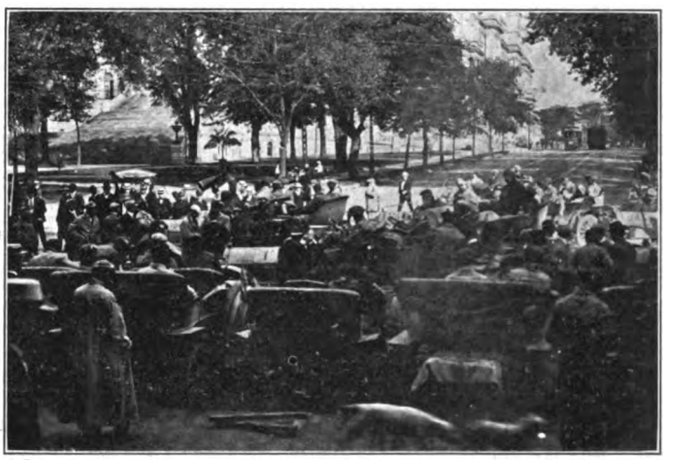
The two Stevens-Duryeas, competing for certificates only, have perfect scores.

In addition to these cars there are 13 cars competing on penalized Glidden Tour teams that individually have perfect scores. The list includes the Rainier, the Oakland, two Studebakers, the Gaeth, the Thomas, two Franklins, the Reo, the Premier, two Marmons, and a Garford.

Of the total of 46 cars actually competing in the tour, 29 have come through to the last day with perfect scores, 12 have dropped out, and 5 continue to the finish with penalizations. The contest will be run until ties are broken.



IN BED AT MILFORD, PA.



RENDEZVOUS AT ALBANY, N. Y.

Except in a comparative sense, Philadelphia is not a Southern city, but being the southernmost point of the trip, the tourists were glad to leave it, on account of the hot weather, and head northward on Wednesday, July 15. The night stop was Milford, Pa., 132 miles away, and the plunge into the rolling upcountry and later into the mountainous district brought delightful relief in pure cool mountain air. None of the Glidden cars incurred any penalties, but two of the Hower contestants met with trouble, one of them being a perfect score car up to that point. This latter was the Reo, No. 101, driven by R. L. Lockwood, which lost 12 points for being late, making its remainder of points 665, as it had previously been penalized 302 points.

Accidents happened to the Premier confetti car and to the Gyroscope runabout, No. 113, which was continuing as a noncontestant. The Premier broke its front axle as the car was near Nazareth, 69 miles from Philadelphia and 6 miles from Easton. No harm was done the occupants. The Gyroscope precipitated a more exciting incident. As it was going about 25 miles an hour, its steering arm broke, and the machine darted off the roadway, down a steep embankment. It crashed into a huge log which lay crosswise of its path. The log was loath to take up movement too rapidly and retaliated by crushing in the whole front of the car. Both the driver and the mechanic had jumped, and they landed some 20 feet away in soft dirt. At this point it was decided that the Gyroscope would not continue the trip with the rest of the tourists. The scenery of the day was a pleasure to all who took the leisure to observe it. Especially around the Delaware Water Gap were splendid views unfolded to the eye, and the combination of mountain and water scenes gave pleasant variety.

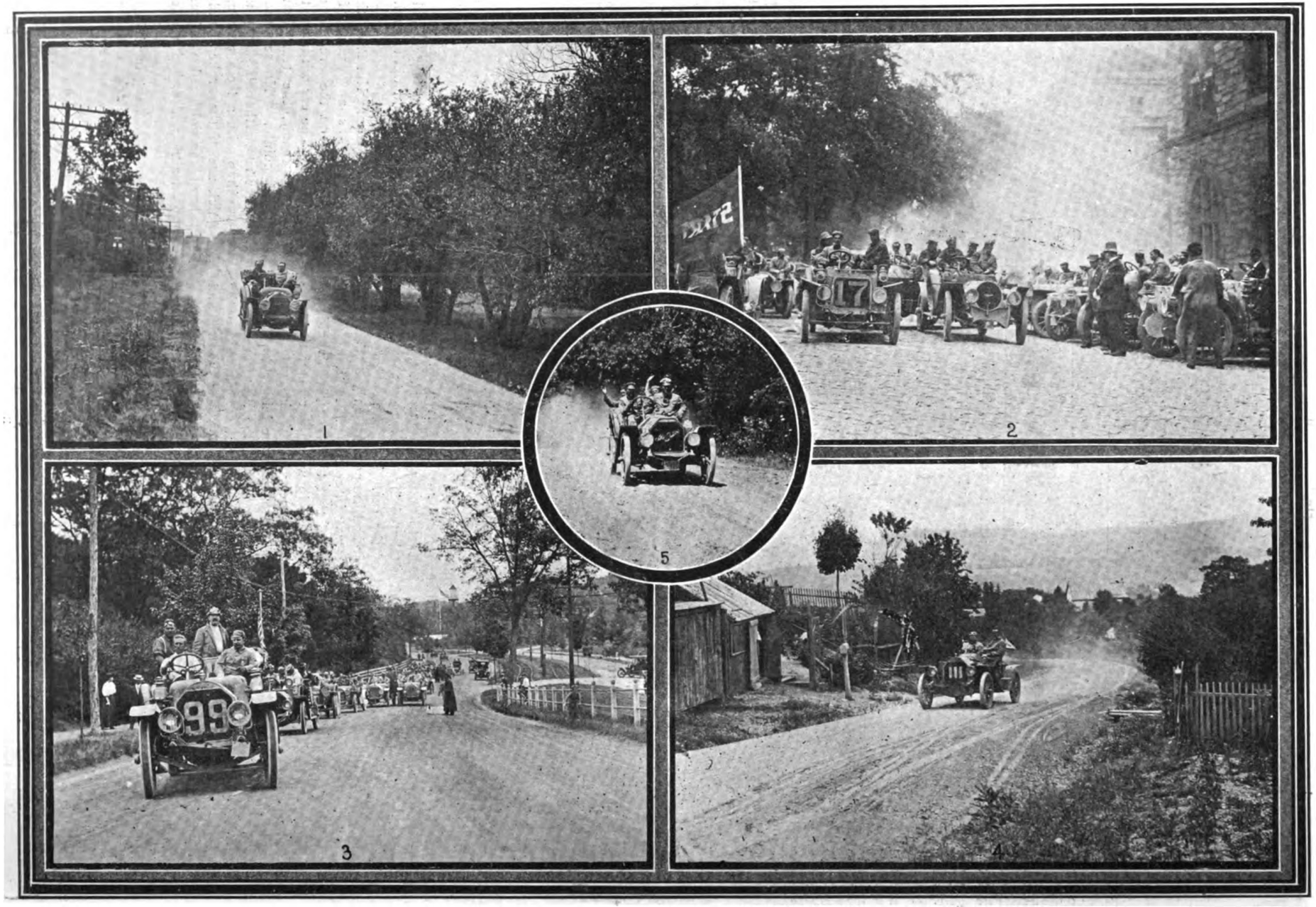
From Milford to Albany, 158½ miles, was on Thursday made the basis of a 19 miles per hour schedule, the time allowed for the big cars being 8 hours and 15 minutes. This was ample, despite the fact that the actual distance was some 6 miles more because of a necessary detour. The smoothness of the roads and a cross wind which blew the dust away, made high speed possible without discomfort. The wind did not confine itself to blowing the dust, however, and removed considerable of the confetti trail, which at times bothered the drivers who were following it. The Catskills made the roads very winding in places, and many of the speedy cars found difficulty in keeping to the curves.

The Glidden Team No. 2, of the Buffalo Club, suffered as a result of steering knuckle trouble on the Premier driven by J. W. Moore. The car withdrew to make a satisfactory repair, the team being penalized 333⅓ points. No serious accidents marred the run, although Mrs. Cuneo had a near-smashup with a freight train, compelling quick use of the brakes, while the Gabried horn car followed wind-tossed confetti up an alley and dished a wheel.

Again the scenery features were strong, the Hudson River being in plain view from many points on the trip, and the Catskills themselves presenting very rugged and beautiful effects. These were lightened in places by flippant signs invented by occupants of the press car, bearing messages like "Suppose we should lose Hower," and a little further on, "What the thunder would

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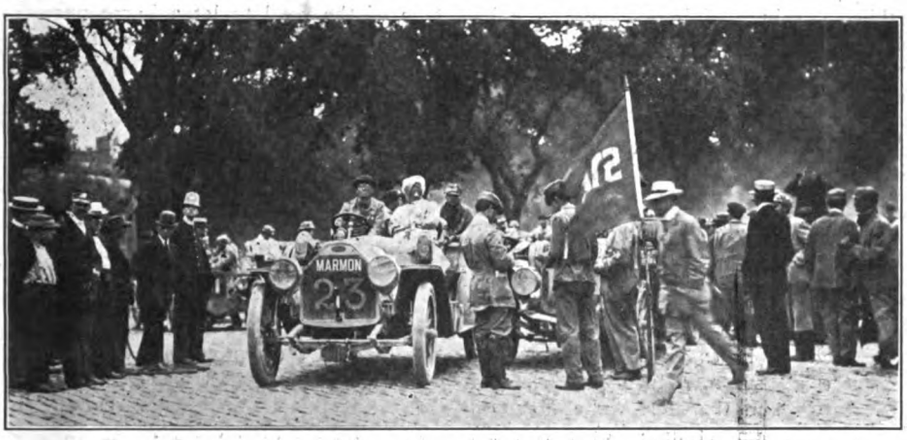
GLIMPSES OF THREE STATES ON ROUTE OF GLIDDEN TOUR.



1. On the Good Roads of Massachusetts. 2. On the Pavements of Albany, N. Y. . 3. On One of Boston's Boulevards.
4. Approaching Milford, Pa. 5. Acknowledging Greetings.

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we care," while at a placid lake the sign said, "Franklins take on water here," which caused the air-coolers as much amusement as anybody else.



ONE OF THE MARMONS AT ALBANY

After the first rush of rapid going, it was seen that there was plenty of time, and so a more moderate pace was maintained, giving opportunity to enjoy country. The pacemaking car lead a slow procession into Albany where the luxuries of the Ten Eyck hotel awaited the tourists. The Rapid truck had arrived early with the baggage, and there was a pleasant scramble for bathrooms and clean clothes.

Friday took the tourists 194 miles, the distance from Albany to Boston, and while it broke only one perfect score in the contest, it developed plenty of wayside trouble of one kind and another. The time allowed was 10 hours, which means "going some" in places. The first 90 miles was through the Berkshires to Springfield, Mass., where the Stevens-Duryea Co., the Fisk Tire Co., and the Knox Automobile Co. joined in serving a collation at the gasolene control, from the kitchens of the Hotel Worthy. There was no extra charge for "fruit taken from the table," and the tourists were grateful for the lunch even if they could not stop to take it in deliberate courses.

From Springfield on to Boston it was a dusty race through level country, and the speed regulations of many towns were ignored. After the time consumed in getting through the Berkshires and in making the descent of the famous Jacob's Ladder, it was thought necessary to "open up" in order to keep to the schedule. The usual speed traps in many places were not employed to annoy the tourists, a bit of courtesy which was much appreciated, but no enthusiasm or demonstrations of welcome and good will, such as were common on the other parts of the tour, were shown. In fact, the Massachusetts residents manifested a supreme indifference to the tour and hardly deigned even to look at the cars as they went by.

The smashing of a wheel on the Studebaker, No. 25, took 333⅓ points from the hitherto perfect score of the Rochester Automobile Club's Studebaker team, as the new wheel that was put on had not been inventoried in the original list of parts carried and therefore disqualified the car. In addition to considerable tire trouble, a number of minor repairs were found necessary among the other cars. The Haynes car, No. 19, broke a strut rod on the rear axle, but a new one was built from raw material and put in without the car incurring any penalty. The No. 16 Stevens-Duryea dismounted its leaking radiator, repaired it, put it on again and finished in good time without penalization. Similarly other cars were able to fix up minor difficulties without using spare parts and with no loss in points.



PICTURESQUE VIEW EN ROUTE

H. A. Van Tine, whose Garford, No. 29, broke a wheel on the run to Bedford Springs and was therefore continuing as a non-contestant, had a narrow escape from serious accident. Just after leaving Worcester he came upon a heavily loaded wagon as he was rounding a turn at high speed. He had to take to the ditch, and smashed into the fence. After missing a tree the machine turned around and stopped. A tire was torn off and the passengers were badly frightened, but matters were soon fixed right and the car resumed its journey. "Rough Rider" Hurlburt, in another Garford, knocked off his usual number of siderails from the little bridges on the road and rocked the scenery generally, but met with no mishaps to his car beyond a few dents in the side.

The evils of throwing things at the tourists had a painful demonstration when James McLean, an observer riding in a Franklin, was struck in the eye by an apple which had been tossed to him by a young girl. The apple hit his goggles, the glass of which broke and cut him badly. His wounds were taken care of as well as possible by the other occupants of the car until Springfield was reached, when he was hurried to a doctor's office and two stitches were put in. He came unpleasantly near having his right eye destroyed, but by good fortune the glass had not penetrated the pupil. A mechanic in one of the Peerless cars was struck the day before by a pine cone thrown by a boy. He leaped from the car, caught the offender and gave him a not too gentle booting. The circumstances in McLean's case, however, were in many respects so different as to make this line of action hardly feasible.



TROUBLE ENCOUNTERED ON A ROUGH ROAD

No stop was made at Worcester and at Auburndale the contestants were met by

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25 cars filled with members of the Bay State Automobile Association. For the entrance into Boston a procession was formed, in which the Marmon team, representing the Bay State Club, was given the place of honor. It was an imposing array that whirled into Boston and rounded up at the Hotel Somerset, at 4 o'clock in the afternoon. The spectacle of the dusty cars accompanied by the shining clean machines of the local automobilists and Milton Lusk doing the calliope act on his Gabriel pipe organ quite roused Boston's interest, as the city had never before seen a Glidden tour in the act of Gliddening. Bouquets were presented to the ladies, and after the travelers had had a chance to wash up, there were speeches of welcome and other pleasant ceremonies. Mayor Hibbard figuratively presented them with the keys of the city, and J. F. Hovstadt, of the local club, outlined the plans that had been for their entertainment.

Saturday and Sunday were spent in the luxury of late sleep in the morning, and clambakes and other festivities in the afternoon. What with special chartered steamers and other thoughtful arrangements, the Western visitors enjoyed the pleasures of the beach resorts and the harbor, while others toured the city, visiting points of historic interest. The change in personal appearance, when for a brief time at least the tourists could assume "purple and fine linen," was in many respects remarkable.

Monday morning's start from Boston had a distinct atmosphere of its own—in the psychological sense rather than in reference to the belching oil smoke. There was a feeling that the last leg of the tour was being begun and that if decisive events were to happen they would happen soon. Poland Springs, Me., 164 miles, was the first objective point, but the roads were so good and the weather so pleasant that not a score was marred or a penalty imposed. There was plenty of tire trouble, but all repairs and replacements were made with little delay.

The nearest thing to an accident that occurred was the falling of a bicyclist in front of a Pierce car, which swerved in time to save him, and an adventure which No. 14 Franklin had in avoiding a head-on collision with a reckless youngster driving a powerful and self-willed runabout. The driver of the Franklin, M. S. Bates, yanked his car to one side, where it almost went down an embankment into a pond.

From Poland Spring to Rangeley Lake on Tuesday, 141 miles, was more to Chairman Hower's liking, in that it spoiled another perfect score and lessened the number of teams in the tie. Not that Hower had any particular preference as to the teams he wanted to suffer, but he disliked the prospect of having cars going around the course all summer trying to run off their ties for the trophies. The Marmon team was the unfortunate one, No. 22, driven by C. L. Clarke, having trouble with the brake band. The car was penalized 10 points for tardiness. The Marmon interests protested strongly, on the ground that the car had been following the pacemaker, who was 15 minutes behind his schedule, but would not let the Marmon pass. It was claimed that had the pacemaker been up to schedule, the Marmon would have had ample time to fix its difficulties and get in on time, as it was only 10 minutes late. No decision was made on the protest, the 3⅓ points against the Marmon team being left standing. The Oakland, No. 28, broke its left front spring, and was 42 minutes late, thus getting a corresponding number of points penalty. This further reduced the Rainier-Oakland mixed team of the Chicago club to 983⅓ points.

By smashing a rear wheel in a deep hole on Wednesday, the Marmon car, No. 22, the justice of whose penalization the day before had been disputed, solved the whole difficulty, as it was obliged to withdraw, leaving the Bay State team with a score of 666⅔. The day's run from Rangeley to Bethlehem, N. H., in the White Mountains, was only 130 miles, but it was rough country and rain had made the roads slippery. Chairman Hower and Charles Glidden were pitched bodily out of their car at one point, when the machine was run to one side of the road to let a horse pass. The soft dirt of the road gave way and the car rolled over into the ditch. Hower was thrown beyond the ditch, down an embankment, where he made a rapid descent of 18 feet into a huckleberry bush. In the excitement of righting the car he was temporarily forgotten, but was later helped up to the road again somewhat dazed. The Oakland, No. 28, of the Chicago team, was again penalized, to the extent of 9 points, bringing 3 points against the team. A number of other cars met with difficulties, but in the case of the contestants they were able to make their repairs and get in on time, while the non-contestants were not subject to penalty for their delays.

Rather than to spoil perfect scores, several of the cars are running without making replacements of lost or broken parts such as would ordinarily be made, as in the case of missing starting cranks or oiler connections. Studebaker, No. 25, took a try at breaking up a bridge and was partially successful. The bridge lost a good part of its side railing, while the car only lost a tire.

In the evening at Bethlehem a meeting of the contestants was held and it was arranged that the cars should parade into Saratoga in the numerical order in which they checked out from Buffalo at the start of the tour. This arrangement was designed to prevent racing for first arrival at Saratoga. It was also decided to let the contestants check out at 6 o'clock on the following morning instead of 7 o'clock.

Plans for a 1908 Glidden and Hower tour to Denver, with tenting parties en route, and a 1910 tour in England, Scotland and Wales, doing the 2,000 miles from Land's End to John O'Groat's, are already being discussed by the participants in this year's tour.



PREMIER "CENTURY A DAY" PRESS CAR



F. B. HOWER (AT WHEEL) AND C. J. GLIDDEN

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CHRISTIE GETS OLDFIELD'S SCALP

Sensational Struggle for First Place in Star Event at St. Paul—De Palma Wins Two of the Races.

With ideal weather conditions, the best field of entries ever gotten together in the West, a great throng of 20,000 people massed in the huge stands, no bothersome delays, fast times and not a mishap of the slightest character, together made the race meet of the St. Paul Automobile Club at the State fair grounds on Wednesday of last week, 15th inst., one of the greatest sporting events that ever has been held in the region of the Twin Cities.



CROWD OF 20,000 AT ST. PAUL MEET

The meet was held in honor of the visiting Shriners who are on a pilgrimage to St. Paul and camel drivers and the horsemen of the plains gathered in large numbers to watch the modern leviathians vie with each other in tests of speed. The scene presented by the assembled tribesmen and dwellers of the Twin Cities at the trackside was fascinating. On every hand gleamed the red, and yellow and the white of the fez of the Moslem faith, plotted in solid rows in the stands, scattered over the home course, sprinkled everywhere, while the tribal ribbons and silken emblems of the faith unfolded in the breeze in confused masses. The speeding machines flashed in lightning kaleidoscopic vision the red, the green and the yellow of the prophet. From the stands, packed in unyielding lines of congested humanity, the overflow flattened down into the paddock, spreading out on either side until the green of the grass was hidden. Truly it was a great and picturesque throng.

Naturally the most interest centered in the event known as the quadrangular sweepstakes for professionals at five miles. Kilpatrick's big racing Hotchkiss did not arrive in time for the start, but it did not make much difference with the crowd as they had conceded the event to either Christie or Oldfield. Ralph De Palma, who by the way, in this event drove Oldfield's discarded Green Dragon, was the third starter. Oldfield and De Palma went in the first heat, but the former was never headed. The Green Dragon exhibited signs of old age and was satisfied to quit after eating the dust for several miles. The final heat possessed more than ordinary interest as it brought together Christie and Oldfield. It may be remembered that last fall Oldfield arranged a $500 race at Pittsburg, not expecting any one with a car faster than his to appear on the scene. Christie unexpectedly appeared, much to Oldfield's chagrin, but he never had a chance for the $500, as he smashed up his car and landed himself in the hospital while making an exhibition run before the races. There was no hippodroming in this later race between Christie and Oldfield, as the former was after the champion's scalp, and how he got it is now a matter of history.

Oldfield drew the pole for a rolling start, but Christie jumped into the lead at the quarter and kept 20 feet of daylight between him and his rival until the three-quarters pole, when Oldfield slightly advanced his position and brought his front wheels even with the rear wheels of his rival. The succeeding miles were exciting. Oldfield would gain a little on the stretches, but Christie gained on the turns and it was nip and tuck until the last stretch, when Oldfield came tearing down the track, gaining on Christie with every second. That was when the crowd rose en masse and cheered, for each driver had his rooters. It was an exciting moment when Oldfield gradually closed the gap, but the tape was too far away and Christie flashed over a winner by ten feet. The time for the heat was five minutes flat.

The 25 miles endurance race proved more interesting than was expected, and but for an unfortunate occurrence it would have been the best event of the day. Soules in a Stearns, Schoenick in a Renault, De Palma in the Allen-Kingston, and Patterson in a Packard, were the starters. Soules and De Palma soon lapped the others. De Palma took the lead at the start and held it until the sixth mile, when Soules got a notion that he would like to kick up some dust. The position did not last for long, however, as De Palma again went up front and in the tenth mile Soules lost his goggles. The dust raised by De Palma's car was too much for Soules and he had to stop for his eye protectors. This delay was sufficient for De Palma to gain a lap and although Soules re-entered and kept hugging him to the finish, he never could regain the lost lap. Patterson and the driver of the foreign car both dropped out.

In the mile trials Christie, Oldfield and De Palma tried to reduce Christie's record for the track of 52 seconds. Christie failed by 2⅘ seconds, while Oldfield's time for the circuit was 56⅘ seconds. De Palma was clocked in 58 flat.

For the third successive time Oliver Crosby's Packard car won the Twin City championship race for stock chassis, Smith's Packard of Minneapolis, being the other contender. Patterson handled the St. Paul car and was never headed from the starting gun, winning ultimately by a quarter of a mile in five. The prize was the Twin City cup, with a gold watch fob to the driver.

De Palma had things his own way in the five miles event for 40 horsepower stock chassis, his Allen-Kingston winning over Patterson in 5:14⅘. Martin, in a Thomas, was third. The five miles event for cars costing $1,250 and less went to Charles Nyquist, Buick, in 6:05⅕.

Big fields and keen competition made the motorcycle events of more than ordinary interest, more than a score of riders starting in each event. The five miles handicap for machines not exceeding 30½ cubic inches piston displacement went to O. Gudenschwager, Indian, in 7:18⅘. Charles Van Sickle, who started from scratch, put up a beautiful race, passing man after man. He was beaten at the finish by only a length.

The ten miles open for motorcycles was won by F. S. Haas. The contest after the fifth mile resulted in a battle between Haas and Van Sickle, the former finally winning. The time was 11:22⅖. Van Sickle tried to break the mile track record but the best he could do was a lap in 1:01. The summaries:

Five miles for motorcycles—Won by O. Gudenschwager, Indian; second, Charles Van Sickle, Indian. Time, 7:18⅘.

Ten miles for motorcycles—Won by F. S. Haas, Indian; second, Charles Van Sickle, Indian; third, O. Godenschwager, Indian. Time, 11:22⅖.

Five miles for stripped stock cars costing $1,250 or less—Won by Charles Nyquist, Buick; second, Wheeler, Ford; third, Reynolds, Buick. Time, 6:05⅕.

Five miles for stock chassis, 60 horsepower and under—Won by Ralph De Palma, Allen-Kingston; second, Charles Soules, Stearns; third, Schoenick, Renault. Time, 4:58.

Five miles for stock chassis, 40 horsepower and under—Won by Ralph De Palma,

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Allen-Kingston; second, A. H. Patterson, Packard; third, Martin, Thomas. Time, 5:14⅘.

One mile time trials—Won by Walter Christie, time, 0:54⅘; second, Barney Oldfield, Stearns, time, 0:56⅘; third, Ralph De Palma, Green Dragon, time 0:58.

Five miles Twin City championship for stock chassis—Won by A. H. Patterson, Packard; second, Bagley, Packard. Time, 5:23⅗.

Five miles quadrangular sweepstakes—First heat won by Barney Oldfield, Stearns; second, Ralph De Palma, Green Dragon. Time, 5:05⅘. Second and final heat won by Walter Christie, Christie; second Oldfield. Time, 5:00.

Twenty-five miles endurance derby for stock chassis—Won by Ralph De Palma, Allen-Kingston; second, Soules, Stearns. Time, 26:11⅗.

One mile motorcycle exhibition—By Charles Van Sickle, Indian. Time, 1:01.

Brush Plans Demonstration Tour.

Radiating from the Detroit factory in different directions, four runabouts and a delivery car of the Brush Runabout Co. will shortly set out on tours which in total will cover 14 States, 400 towns and cities, and some 4,000 miles, and which will have a triple purpose. Each car will carry an observer who will keep a record of the amount of oil and fuel consumed, as well as a detailed account of all repairs and replacements. A silver cup and a cash prize will be given the driver making the best showing in cost per mile.

The objects of the tour will be to show the cars in the principal towns and agency points en route, to get a record of performance, and to distribute good roads literature. Each car has a different route and objective point, the first going from Detroit to Boston via New York; the second to Washington via Pittsburg and Philadelphia; the third to Kansas City via Cincinnati and St. Louis; the fourth to Minneapolis via Indianapolis and Chicago; and the delivery car from Detroit to Chicago and return.

The observers will be newspaper men, among whom will be a cartoonist, so that there will be no lack of record as to what happens. The State highway commissioner of Michigan is going to help out with the good roads literature which will be distributed, and the agents and populace along the highway will be given every opportunity to examine the new models of the cars.

"Accelerative Test" the Latest Competition.

Among the forthcoming competitions on the calendar of the Royal Automobile Club of Great Britain, is an "acceleration test," which is to come off some time during August. It is intended to demonstrate the accelerative powers of the cars—as the name implies—with particular regard to their fitness for service under heavy traffic conditions, where quick starts and stops are an absolute necessity.

N. A. A. M. STANDS WITH A. A. A.

Makers Vote Exclusive Recognition of the Association as Governing in Racing—Foreign Bodies to be Notified.

The car makers belonging to the National Association of Automobile Manufacturers have taken a hand in making it clear that the American AutomobileAssociation is the governing body in racing matters in the United States. At a meeting of the executive committee on Wednesday of last week it was decided to advise the recognized clubs of Europe that the manufacturers regard and will recognize only the American Automobile Association as the governing body and that they will support only such events as are organized or sanctioned by the A. A. A.

The attention of the foreign clubs and manufacturers will also be directed to the fact that participation in events on this side that are not sanctioned by the A. A. A. will disbar the participants from the sanctioned events such as the Vanderbilt cup race and minor races and from all events to be conducted on the Long Island Motor Parkway.

Further resolutions were adopted approving the action of the central conference committee of the A. A. A. at Buffalo the day before in deciding that it would not be fair or just to change the rules for the Vanderbilt cup contest this year.

The representative character of the meeting was indicated by the presence of Thomas Henderson, of the Winton Motor Carriage Co.; S. T. Davis, Jr., of the Locomobile Co. of America; G. W. Bennett, of the White Co.; Charles Clifton, of the George N. Pierce Co.; Wm. E. Metzger, Northern Motor Car Co.; S. D. Waldon, of the Packard Motor Car Co.; W. R. Innis, of the Studebaker Bros. Mfg. Co.; C. C. Hildebrand, of the Stevens-Duryea Co.; L. H. Kittridge, of the Peerless Motor Car Co.; W. M. Lewis, of the Mitchell Motor Car Co.; R. D. Chapin, of theChalmers-Detroit Motor Co., and S. A. Miles, general manager of the association.

A proposition for a New York to San Francisco automobile race for general trade participation was considered at the same meeting, but it was decided that such a contest is at the present time unnecessary. The sanction for it has not yet been granted, and will be withheld lacking the approval of the manufacturers.

Chicago Wants the Thompson Cup Race.

Having renewed its allegiance to the American Automobile Association, the Chicago Automobile Club has evinced a desire to secure the management of the proposed stock car road race for the Jefferson De Mont Thompson cup. Sydney S. Gorham, secretary of the club, this week telegraphed Chairman Thompson of the American Automobile Association racing board, and donor of the trophy, expressing the club's wish to secure the race for Chicago and its vicinity. A course embracing a 22-mile circuit, without grade crossings, and running through only two towns, that is to say, Lowell and Crown Point, has been picked out with this event in mind, and is said to be admirably suited to the test. President Hotchkiss, of the A. A. A., was consulted with regard to the proposal during a recent visit to Chicago, it is explained, and his attitude is supposed to be favorable toward it. A petition to the governor of Indiana seeking his permission for the use of State troops to guard the course, already is being prepared for circulation in Lowell.

Point Breeze Meet May Cause Trouble.

Trouble is brewing in Philadelphia over a race meet that is scheduled for the Point Breeze track, Saturday, 25th inst. The Quaker City Motor Club has been planning to hold a race meet in Philadelphia about August 15th, thinking it not advisable to promote one at an earlier date. They were, therefore surprised to learn that a meet had been sanctioned by the American Automobile Association. Investigation developed that the sanction had been granted to the Norristown (Pa.) Automobile Club. The Quaker motorists resented very much the invasion of its territory by the Norristown club, and protested to the American Automobile Association with the result that the A. A. A. recalled the sanction granted to the Norristown club.

Despite this fact, the promoters of the meet decided to run it just the same, but altered their original plan of having a number of events. They now propose to run a 100-mile match race. J. W. Parker, Jr., a Philadelphian, is said to have agreed to meet any driver in such a race. The promoters tried to secure Wallace H. Owen, and failing to get him, made overtures to Louis Strang.

Graves Buys the Grand Prix Winner.

Extra spice will be added to the promised race for the Vanderbilt cup by the presence of the Mercedes, with which Leutenschlager won the Grand Prix race in France on the 7th inst. It is announced that his car has been bought by Robert Graves, who went abroad principally to see the great race, and who had intended to enter for the Vanderbilt cup race this year the Mercedes car with which he tried for the American trophy several years ago. Mr. Graves, it is said, will not be the only one to enter a foreign car in the coming race, as several other Americans are reported to contemplate the purchase of foreign cars and to compete with them on the Long Island course.

"The A B C of Electricity." Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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MONOPOLISTIC PHASE OF PATENTS

What They are and the Rights They Confer—How They Benefit Both the Inventor and the Public.

It is a remarkable fact that one of the most advantageous as well as one of the most abused of American institutions, should be a direct supporter of the monopoly, and as such, should receive the cordial endorsement of the public at large, as well as those who seek its specific protection. Patent law regarded and upheld as a monopoly probably is a novel idea to many who have not studied its logical effect very closely. As such, however, it has a legitimate basis, and is the natural outcome of the primitive method of protecting an original process or other invention by the crude device of secrecy. An unusually clear presentation of the structure of patent law, showing its origin as well as its rightful monopolistic purpose, is set forth in a paper read before the New England Society of Orange, N. J., recently, by Edwin J. Prindle, as published by American Industries. Its analytical view of the patent situation should be of considerable assistance in the establishment of a proper appreciation of questions pertaining to its use and abuse.

That the patent is a true monopoly is brought out by the following quotation from a recent decision, which the author introduces:

"Within his domain, the patentee is czar. The people must take the invention on the terms he dictates or let it alone for 17 years. This is a necessity from the nature of the grant. Cries of restraint of trade and impairment of the freedom of sales are unavailing, because for the promotion of the useful arts, the constitution and statutes authorized this very monopoly."

"The operation of the patent laws, like that of the laws of nature, is so unobtrusive that comparatively few realize their importance," continues Mr. Prindle. "They have been one of the most important factors in the development of our country from non-manufacturing colonies to the greatest of manufacturing countries. . . . .

"Before patents were granted for inventions, the inventor had but one way to secure a return from his invention. That was to keep it secret.

"Secret inventions were the most valuable possessions of many families and guilds. But in proportion to their value, they tempted the cupidity of competitors. The secret of making Venetian glass was greatly prized and was most jealously guarded. A Venetian named Paoli, who possessed the secret, left Venice and wandered northward practising his art. He was stabbed in Normandy with a dagger marked 'Traitor'—a measure taken to preserve the secret.

"In 1710 the Elector of Saxony learned that a man named Bottger had discovered the secret of making porcelain. He accordingly confined him in the castle of Albrechtsburg until the discovery had been perfected. The workmen were sworn to secrecy, and the draw-bridge was kept up except to admit those specially authorized. Thus was the manufacture of the famous Dresden ware begun. The secret was soon carried to Vienna, where a royal factory was established, and to France, where it was the foundation of the manufacture of the famous Sevres pottery. . . . .

"The inventor could only keep his invention secret where the invention was either a process of making something, or a machine whose product he could sell. If his invention was a new article of manufacture, or a machine, which was itself the subject of sale, the moment he sold one his competitor could see its construction and copy it, and that without the handicap of the usually costly experiments of the inventor in making his invention. There was, therefore, little encouragement to make any invention which could not be kept secret. This worked to the disadvantage of the public in several ways. First, the precautions to preserve secrecy necessitated a limited output by a single establishment, and resulted in a restricted supply at a relatively high price. Second, the secret if successfully kept, might and sometimes did die with the inventor, and so was completely lost to the public, or perhaps but an imperfect knowledge of it became public. Some of these lost arts have never been rediscovered. Third, the frequent theft of inventive secrets discouraged the production of inventions.

"The perfection of an invention often involves the expenditure of a large sum of money and a vast deal of time. As a not unusual example, I may state that a comparatively simple, special typewriter of not very large commercial possibilities cost over $200,000 in experiments and special machinery before it was ready for the market. If a competitor had been at liberty to copy the machine as soon as it was put on the market, the competitor would have been a large part of this sum better off than the inventor at the start. These difficulties greatly discouraged invention, and the public was deprived of many inventions it might otherwise have had.

"Thus the wisdom of granting the inventor an absolute monopoly of his invention for a limited term will be apparent. The inventor is encouraged to invent by the assurance that his exclusive possession of the invention will be preserved just as fully and much more certainly than if he kept it secret. The public is made certain of the possession of the invention at the end of the term by the requirement that in order to have a valid patent the inventor must fully disclose his invention at the time it is granted. . . . .

This, then is the nature of a patent: It is a contract between the public and the inventor, by which, in consideration of such a full disclosure of the invention that any person skilled in the art to which the invention relates can make and use it, the public grants to the inventor the right to exclude all others from making, using and selling the invention for a limited term (in this country 17 years).

"There are four classes of inventions which can be patented. These are arts, machines, articles of manufacture and compositions of matter. An art is an operation or series of operations performed by rule to produce a physical result. Thus the art of casting car wheels was patented, which consists of pouring metal into the mould in a tangential direction so that the metal acquires a whirling motion and the heavy solid metal is thrown out to the rim of the wheel and the light dross displaced toward the center. This gave wheels having tires formed of solid, durable metal.

"The class of machines needs no explanation. An article of manufacture is anything made by the hand of man that is not a machine or a composition of matter, such as a lead pencil. A composition of matter is any mechanical or chemical mixture of two or more substances, such as soap or a tool steel.

"The monopoly granted by a patent is a peculiar one. It is negative in character. It gives the right to exclude all others from making, using or selling of the invention; but it does not grant the positive right to the inventor himself to make, use and sell his invention, if he does not already possess that right. That is, if he cannot practise his invention without using that which has already been patented to another, then, while his patent gives him the right to exclude all others from his invention, he cannot himself make, use or sell any embodiment of his invention until the patent which he would infringe by so doing is dead. For instance, Bell invented the first speaking telephone, and Edison, Blake, Berliner and others invented telephones which were much more efficient than Bell's, and yet, although each of these later inventors received a patent for his improvement, he could not make, use, or sell his telephone without Bell's consent, because all of the later forms of telephone employed the principle that had been patented to Bell, although in an improved manner. A man cannot use another's invention merely by improving it.

"It is clear from what has been said that a patent must contain a description of the invention so full and clear that any one skilled in the art to which it pertains can practise the invention. In addition to the written description there are drawings, when the invention is capable of such illustration.

"Every invention is, however, an evolution (consciously or unconsciously) of some prototype, and therefore it is never true that the whole device which is represented

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in the drawings is the conception of the patentee.

"How, then, is the public to know the limits of the patentee's monopoly, so that it may know what the public is free to make, use and sell, and what it must let alone? At first there was no way by which it could be told from the patent itself, and the monopoly included the entire machine, minus all the defendant in suit could prove to be old. Then the expedient was adopted of requiring the patentee to specify the part or combination of elements to which the improvement related, this being done in a clause or clauses at the end of the description, called 'claims.' These claims constitute the measure of the monopoly. For instance, the man who first invented the safety bicycle might have made such a claim as this:

"'I claim a velocipede consisting of front and rear wheels, a forked head having said front wheel pivoted in its fork, and having a steering handle at its upper end, a trussed frame pivoted on said head and having a rear fork in which said rear wheel is pivoted, a saddle on said frame, a crank shaft journaled in a bearing on said frame, a sprocket gear on said crank shaft and one on said rear wheel, and a sprocket chain connecting said gears for driving said rear wheel by the motion of the cranks.'

"From this the public would know the patentee did not claim that his invention included the high bicycle consisting of a large front wheel as tall as a man and having a small rear wheel, a perpendicular forked steering head, and a backbone pivoted to the head and having the small wheel mounted in a fork on the lower end of the backbone, the saddle being on the backbone up over the front wheel.

"They could be certain the latter form of bicycle was not within the monopoly granted, because, for instance, the claim includes as elements, the crank shaft, the sprocket gears, and the sprocket chain, by which the rear wheel is driven from the crank shaft. None of these elements is found in the old high wheel bicycle, nor are there any parts which perform the same function."

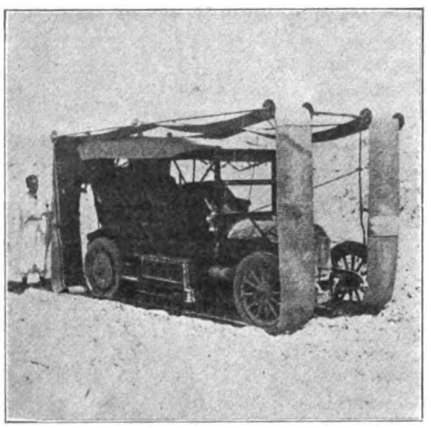
Attaching Speedometer Driving Gears.

In attaching the driving gear of a speedometer to the wheel, a simple method of centering it so that it is true in its relationship to the shaft gear, is to hold a piece of chalk between the fingers, and with the hand resting on and steadied by some permanent fixture, such as the steering arm, turn the wheel so that the chalk will mark the spokes of the wheel in a practically perfect circle. With this chalk outline as a guide it is easy to properly adjust the driving gear. Unless the gear runs true, it will be the cause of an objectionable noise and this annoyance will be avoided if care is taken when the attachment is put on the wheel. Naturally the life and usefulness of the speedometer depends to a great extent on the proper adjustment of the drive.

CARRYING ITS OWN ROAD ALONG

Odd Equipment of Car for Desert Travel—How a French Tourist Drove from Tunis to Algeria.

Long-distance tourists who depart from the better traveled paths of civilization with their automobiles frequently encounter serious difficulties in adapting themselves to the conditions of the trails which correspond to highways elsewhere. Bridge-building, swamp paving and general reconstruction work are merely incidents to such exploits. But it is seldom the motorist is obliged to carry his entire road along with him. This, however, was found to be necessary in the literal sense in connection with a journey in Southern Tunis and Algeria, which was taken not long since by a French motorist, M. G. Liegeard.



CAR EQUIPPED FOR THE DESERT

His 28 horsepower car with its equipment complete, weighed about two tons, which, with the ordinary tire equipment, would have been sufficient to sink the machine hopelessly in the sand of the desert, unless some special provision were made against it. After mature deliberation a scheme was settled upon which followed closely the idea of the designer of the curious "Caterpillar" tractor at present in use by the British War Office. That is to say, an endless traveling roadway was provided, which the machine automatically picked up and set down again, thus providing a uniform surface for the wheels to run upon.

The principle of the thing is shown by the accompanying picture, which is sufficiently suggestive in itself. Upon each side of the car a framework was rigged carrying rollers, over which were stretched endless bands of cocoanut fibre, some 19 inches wide, which passed along the ground under the wheels, and back overhead to the front again. The wide tread surface thus obtained proved sufficient to prevent the wheels from sinking into the sand to an excessive degree, and also protected the tires from the effect of thorns. In proof of this it is only necessary to indicate that although the desert section of the journey was more than 600 kilometers long, or about 375 miles, no tire troubles were encountered.

How to Treat Imitation Leather Tops.

"It is surprising to see wrinkles in some of the imitation leather tops, considering how easily this difficulty can be remedied," says the Carriage Monthly. "The fault is not at all with the imitation leather, but with the trimmer himself. In the first place it is misleading to suppose that an imitation leather top should be treated in the same way as it is customary to treat a leather top, and especially the drawing of the material over the naked bows, allowing a certain fulness for the curve.

"A very good suggestion is to first cut the imitation leather in size to suit the center top piece and side quarters respectively. Next take the side quarters and paste the bottom edge, which, however, should be cut with a curve, about ½ inch, and if the top is long, ⅝ inch curve should be given. When tacking out to dry, see that the bottom edge is tacked out straight, which may be done with the aid of a straightedge, and also by giving it a slight draw lengthwise.

"When this is done, proceed to apply the webbing to the top and mark the places for the seams with small tacks, which are left projecting. Then take the quarters, if dry, and draw them over the bows in the usual manner, being careful to mark each seam. Then snap the chalk line between the various marks, which will afford sufficient curve. Take to the bench and cut to chalk line, allowing half inch for the seam.

"Proceed in a similar manner with the roof piece, after which the top is ready for seaming up, which is usually done on the sewing machine. The top thus prepared, proceed to stuff by applying one light layer of hair, which is sufficient for any top.

"Some trimmers do not use any hair, and make a smooth top. Cover the hair with light-weight muslin, and the top will be ready for the final drawing, which is similar to the drawing of any other top, differing only in respect to the care taken to obtain a smooth job. As a precaution, the seams should be dampened, lest there should be some fullness, as moistening leather shrinks any wrinkles that may be there. By the above explained method the wrinkles will be successfully avoided."

Dismounting the Exhaust Manifold.

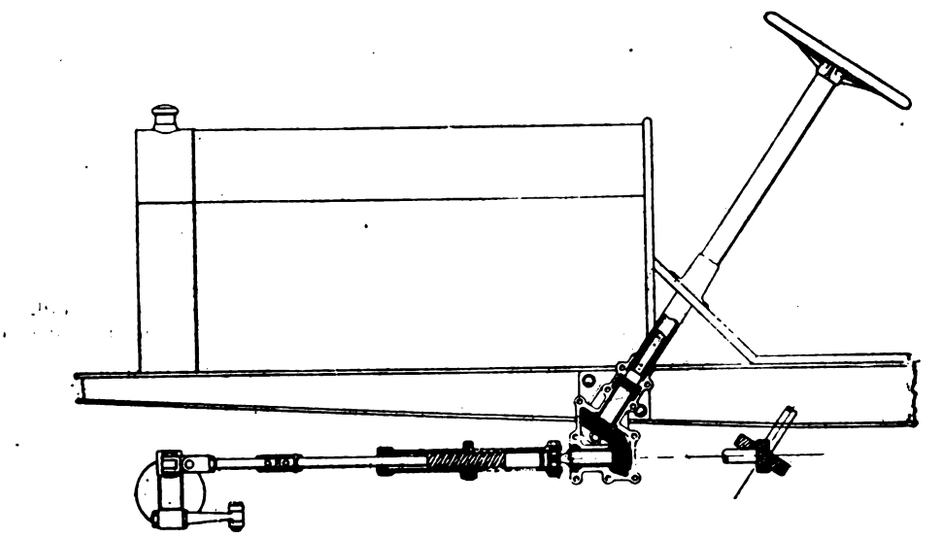
Whenever it is necessary to dismount the exhaust manifold and the piping connecting it with the muffler, it is well to smear the threads of the studs and bolts with a liberal coating of graphite paste, formed of flake graphite and "hard oil," or some other grease. This will prevent rust and insure the free release of the parts when next it is desired to dismount them. Without this precaution, there is danger that the threads will rust in place, making it next to impossible to release them without stripping.

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REDUCES WEAR OF STEERING GEAR

Increased Contact Surface in New Adaptation of Screw and Nut—Self-Renewing Feature of the Device.

However satisfactory the ordinary types of steering gear may have proved themselves in practice, the fact remains that they have sundry defects which might be remedied by slight modifications in design. Thus the average so-called irreversible type of gear because of the limited amount of contact surface in the worm and segment, of which it is most commonly composed, is subject to an inordinate amount of wear. Even



though provision may be made for compensating for this by adjusting the mesh of the two members, this is a disadvantage, which is further increased by the fact that a great amount of dependence must be placed on the very small amount of metal contained in the teeth which are in mesh. A possible modification which is of considerable advantage in this respect, is embodied in the screw and nut type of gear, of which several types are already in use. A recent development in this line, however, goes a step further than the ordinary device of this description by providing for a very great length of screw, and so, a great amount of contact surface.

The arrangement, which is shown by the accompanying illustration is that of the Birch steering gear, a British invention, which is characterized by a telescopic rod taking the place of the ordinary plain connecting rod, while the transmission from the steering column to the gear proper is through bevel gears. The bevel gears are connected to the telescopic portion of the gear through a universal joint, allowing for weaving in the frame, and the screw is enclosed in a dust and dirt proof casing.

By employing a divided sleeve, or nut, provision for adjustment to compensate for wear is made. The two halves of the nut may be brought together by means of suitable nuts and studs, so that the amount of grip of the nut upon the worm may be altered at will. Each of the sections is flanged, and by shifting the flanges over one another the two halves may be rotated slightly to bring about the desired effect. An option in the construction of the transmission from the column to the gear proper is the use of skew gears, as shown in detail at the side of the illustration.

A further point which is noteworthy in this connection is that instead of the usual segments, complete gears are used in the transmission. The object of this is to provide ready means of renewal for wear. The gears are mounted on squared shafts. By releasing the fastenings and shifting them about, a quarter turn at a time, new surfaces may be presented, thus prolonging the life of the gear to a considerable extent. This feature, together with the great amount of wearing surface in the worm, is held to make the gear well-nigh indestructible.

Replacing Tube in Clincher Tire.

When replacing the tube in a clincher tire care should be taken to clear the inside of the shoe of all dirt and dust, as the chafing incident to the presence of any grit which may remain is very deleterious to the inner tube. In doing this it is not sufficient merely to scoop out the dirt with the finger ends, after having tapped the cover lightly around the outside. The inside should be mopped out with a dry rag, after which any remaining particles may be gotten out by slightly moistening the rag and sopping them up. Subsequently a good dusting with powdered chalk should be given the cover.

A simple test for determining whether the muffler is clogged in such a way that the exhaust is escaping through leakage at improper points, is to place the toe of the boot over the discharge pipe, momentarily, while the engine is running slowly under throttle control. If the only exit for the waste gases is through the proper channel, the effect will be to slow the motor.

ACTUATION OF SLIDING GEARSETS

Relative Merits and Demerits of Selective and Progressive Methods—Source of Difficulty and the Remedy.

One of the great advantages of the selective method of operating sliding gearsets is that the shifting lever may be thrown clear back in either of its slots with the absolute certainty that the gears will be drawn into their proper position—providing only that the mechanism is in good order. In this respect it represents a considerable advance over the progressive method of actuation, in which a certain amount of skill is required in selecting the notches, when making a quick change of gear, unless some special automatic contrivance is provided to release the catch when passing from one gear to another. By that very token, however, the selective type of change gear is robbed of one of the advantages possessed by the other type. For the positive lock afforded the progressive type of lever is replaced in the selective type by a series of automatic fingers or latches, which are intended to retain the pull-out, or gear striking rods, in the position selected by the lever. In some types of transmission, this provision is further supplemented by the use of a special form of interlocker which secures permanently the rods which are not for the moment engaged by the lever.

A fault which exists in this type of transmission, no matter how well made, once it has been permitted to get out of order, is that the gears develop a tendency to "jump" out of mesh when the car takes an obstacle in the road. This difficulty is caused through some fault in the latches which nominally hold the gear striking rods, except when being forcibly actuated by the lever. Sometimes the springs become weakened through continual use, but more often it happens that the notches in the rods become fouled with dirt and grease, or that the cases in which the latches and springs are enclosed become fouled in the same way, so that the latches fail to engage. A rare, though possible source of this difficulty arises also through the connecting mechanism between the lever and rod becoming disarranged, so that the rod is drawn into its proper position when the lever is thrown clear back in its slot.

While the difficulty arising from the tendency of the gears to jump out of mesh in this way is not necessarily a serious one, yet there are times when it is productive of injury to the gears as well as inconvenience to the driver, so that it is important that it should be prevented. In order to do this, it is only required that the latches be kept in order—a thing which may be done readily enough, if they are subjected to sufficiently frequent inspection and cleaning, which is well bestowed, by the way, upon any part of the mechanism.

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SPOKANE HOLDS FIRST CLIMBFEST

Contest Preceded by a Big and Beautiful Parade—Spirited Events on the Monroe Street Hill.

Preceded by a parade of 60 decorated cars led by a truck containing a brass band of 20 pieces, Spokane's first hill climbing contest, held in that city on Tuesday of last week, 14th inst., was a big event in the sporting history of that northwestern city. The hill climb was held on the Monroe street hill, 1,800 feet long with a rise of 166 feet.

The decorated parade which raised the curtain on the real competitive events was worth witnessing. There were more than 150 cars in line and of this number 60 were decorated. A number of non-competing cars were picked up along the route of march to the hill climb.

The Overland car, driven by Mrs. M. L. Wilson, won the first prize for decorations. The car was smothered in pink and white sweet peas and carnations, with a floral lap robe and the name of the car designed in flowers across the front. Second prize went to Mrs. A. L. Horenburg, whose Maxwell was a symphony in evergreens and scarlet crimson rambler roses. Fred Stone's Buick, which was decorated with poppies, roses and greens was adjudged fourth, and John Sengfelder got a pair of gauntlets when his Haynes car was picked fifth. Flags and bunting were its decorations.

The hill climb on Monroe street attracted a large crowd and especial interest centered in the free-for-all event, as the prize was a beautiful silver cup. Arthur Engquest, driving a Thomas-Detroit, covered the incline in 48 seconds and the nearest approach to that time was made by the Inland Motor Co.'s Stevens-Duryea, which was clocked in 58⅘. In the tryouts of the winning cars the Thomas-Detroit reduced its time to 45 seconds, with the Stevens-Duryea a few seconds slower. This latter car won in the class for cars between $2,000 and $2,500.

Dr. R. H. Hahn, driving a Ford, won the handicap event for cars selling for less than $2,000 when he climbed the hill in 1:32⅗, and he also won a victory in the class for cars under $1,000 in 1:34⅖. The class for cars between $1,001 and $1,500 went to J. T. Cronin, who drove a Maxwell. His time was 1:33⅕. M. J. Brayton, Oldsmobile, made the best time in the class for cars between $1,501 and $2,00. the watches registering 1:03⅕.

New Coast to Coast Record.

With the aid of a fellow student at Yale and a chauffeur, C. T. Crocker, a young Californian, has succeeded in establishing a new transcontinental record for a car driven by a single crew. His time from New York to San Mateo, Cal., was 20 days. Leaving New York on June 25th. he reached his destination on the 14th inst., in 18 days running time, having lost two days at Cheyenne, owing to a broken wheel, which was rebuilt by a local wheelwright. The car used was a 1907 Fiat, in touring form except for the addition of fuel and oil tanks of large capacity, and skids in place of the usual mudguards. Practically no spare parts were carried, but plenty of mud tackle and a camping equipment were available.

The best time ever made from coast to coast by a car handled by a single crew without relay running was 33 days, until a month ago, when J. M. Murdoch, in his 30 horsepower Packard touring car, came from Los Angeles to New York in 32 days, with seven passengers, including two women and three children in the car. He laid up seven days on the road and made the trip in 25 days actual running. Crocker improves on this by 12 days gross time, and seven days running time. He comes within 5 days of the 15-day mark made by L. L. Whitman and a crew of five men, in the Franklin car, when Whitman and his men drove night and day in relays.

New York-Paris Race Near Finish.

Technically behind the American Thomas car in the New York to Paris "race," the German Protos car is, so to speak, "on its native heath," having entered the domain of its Kaiser. Before leaving Moscow on Tuesday last the car was stripped for speed, and, as its progress in Germany will probably be expedited as much as possible by the patriotism of "Vaterland," it is a safe bet that it will be the first of the contestants now on the road to reach the French capital. The Thomas car has had hard luck in Russia. It strayed to Viatka through misdirections given by Russians unable to understand signs, and on Wednesday night was 30 hours behind the Germans. While the American car has a big allowance of time because of its trip to Alaska, the handicap is unlikely to count in European summing up of the contest, and the German Protos car, should it escape accident and maintain its practical lead into the French capital, will be hailed on the other side of the big pond as the victor. Lieutenant Koeppen, its master spirit, already wears the imaginary laurel of the conqueror, in the estimation of the German people. The Zust Italian car is reported as having just reached Tomsk, in Siberia.

Proud of Its "P. S." Performances.

While "P. S." usually means the main part of a woman's letter, the Studebaker Automobile Co., of South Bend, Ind., has given it a new meaning by issuing an elaborate document with the significant abbreviation on the outside in red ink. In this connection it means "perfect score" and the printed matter on which it appears, when unfolded gives the details of fourteen notable races and road events in which Studebaker cars have won the "P. S."

LOWELL REVIVES RACE PROJECT

City Daddies Grant Use of Streets on Labor Day—Tyngsboro Selectmen also in Favorable Mood.

The project of a big automobile race at Lowell, Mass., nipped as the bud was ready to bloom just before the Fourth of July, has been revived and Labor Day is the new date fixed for the contest. The Lowell Automobile Club has secured permission from the board of aldermen to use certain streets in Pawtucketville for a race on that date. The city clerk is authorized to grant permits to automobile owners, not exceeding 12, to exceed the speed limit on that day in Pawtucketville or on any day to which the race may be postponed. The streets upon which the race will take place will be closed to other public travel on the day of the race.

As part of the roads to be used as a course for the race lie within the town limits of Tyngsboro, it is within the power of the selectmen of that town to forward the project or to leave it up to the Lowell authorities to provide a course wholly within the city limits. The selectmen are favorable in their attitude. At a hearing which they gave the only remonstrance was based on the matters of guaranteeing the townspeople against personal or property damage and the town itself against any expense for road repairs made necessary by the race. President Heinze and Secretary McKenna, of the Lowell Automobile Club, gave assurances concerning these matters and the selectmen referred the question to the town counsel, whose opinion will determine their final action.

Demonstrating Speed for City Solons.

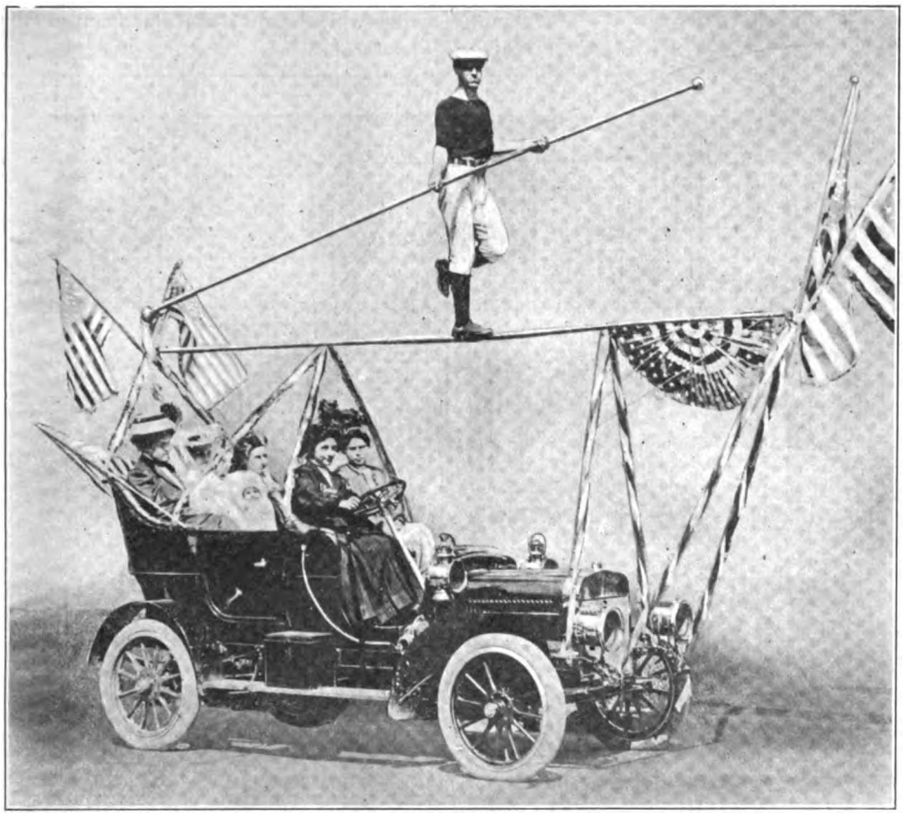
For the purpose of illustrating to the local legislators that the provisions of a new traffic ordinance, introduced in the board of trustees last week, will safeguard pedestrians and general traffic, members of the Sacramento (Cal.) Automobile Club put their cars at the disposal of the city's solons and demonstrated how fast they would be permitted to go if the bill was passed. The ordinance was framed by the automobile club and is a copy of the Los Angeles ordinance. It fixes the speed limit of 12 miles an hour for automobiles in the downtown congested districts, while twenty miles is the limit for the residence sections. Apparently the plan was as successful as it has been in numerous instances of a like nature. The trustees were unanimous in the opinion that the 8 miles limit is far too slow for the business section, and expressed the belief that 12 miles is none too fast. With regard to the outside streets, however, none of them was willing to subscribe fully to the 20 miles limit, as that seemed to them to "hit it up too fast."

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ACROBATIC FEATS ON RUNNING CAR

Clever Agent Utilizes Circus Parade for Odd Demonstration—Declines Invitation to "Go with the Show."

While automobiles have been used for many purposes for which they never were intended, the recent "stunt" of a citizen of Saginaw, Mich., is worthy of special notice, if for no other reason than because of its originality. The "stunt" in question, which furnished a striking illustration of the smooth running qualities of the friction driven Carter car, for which he is local agent, was performed by E. D. Doan. Doan took a car from stock and rigged up a horizontal pole over it, by bracing the latter on the ends of the frame and at the rear of the tonneau reinforced by braces so attached to the sides of the tonneau as to prevent either lateral movement or vibration from side to side, as shown in the accompanying illustration.



CIRCUS STUNTS TO SHOW THE CAR'S SMOOTH RUNNING

The psychological moment for Doan to demonstrate by the use of his attachment, the smooth running qualities of his car came when Ringling Brothers' circus arrived in town. Having secured the services of the 15-year-old daughter of a townsman to drive the car, he entered the machine in the usual "parade," while he, on top of the car did "tight rope" acts on the horizontal bar, balancing himself by the aid of the usual pole. The difficulty of the feat was further increased by the fact that the slightest jerk would have thrown him down among the passengers who comprised, in addition to the "chauffeuse," four ladies and a wee baby.

The demonstration passed off without mishap, however, and was successful in attracting the desired amount of attention to the car as well as to the enterprising performer. So thoroughly pleased with the performance were the Ringling Brothers, that they made an offer to Mr. Doan and his young driver to go with them for the remainder of the season. Doan felt that he could not leave his business, but consented to the extent of following the show to Bay City, where he appeared in the parade the following day.

Dust Laying Experiment on Streets.

Mayor F. D. Stafford, of North Adams, is practically certain to adopt a new method of street sprinkling on certain streets in that city that is believed to involve a solution of the dust problem. This is a method by which it can be used in an ordinary sprinkler, the fluid to be poured on the street and then sanded. The theory is that a street makes its own dust and with the coal tar coating over a street no dust can be made. The mayor is investigating and will probably try the experiment on three miles or so of the streets of that town. It is estimated that the cost of the method is about $300 a mile. One dressing does a year.

WHEN OWNER IS NOT RESPONSIBLE

Court Says He Isn't Liable for Accident Caused by Chauffeur to Whom He Lends His Car.

The owner of an automobile cannot be held responsible for injuries inflicted upon a third person by the vehicle when the chauffeur is driving the car for his own purposes without the owner's presence. Such is the law as interpreted by the Appellate Division of the Supreme Court of the State of New York, and the decision goes so far as to absolve the owner from legal responsibility even when he has consented to such use of his car. Justices Clarke, Ingraham and Scott concurred in this decision, Justices Houghton and McLaughlin dissenting.

George Cunningham sued Burton S. Castle for damages for injuries sustained in being run down by the defendant's automobile at Eighty-first street and Central Park West on September 19, 1904. In the lower court it was shown that the automobile was being driven by Harry Boes, Mr. Castle's chauffeur, who had received the owner's consent to use the car for "an hour or two" for his personal pleasure of business. A jury awarded a verdict for the complainant. The decision on the appeal reversing that finding and ordering a new trial, read by Judge Clarke, held in part:

"It is urged that the automobile was a dangerous instrumentality, and that, having been intrusted to the chauffeur, the liability of the master still attached, because of its dangerous character. The automobile is not necessarily a dangerous device. It is an ordinary vehicle of pleasure and business. It is no more dangerous per se than a team of horses and a carriage, or a gun, or a sailing boat, or a motor launch.

"If the gamekeeper had borrowed his master's gun and had gone from the estate on a hunting expedition of his own and had negligently shot a man, would the master be responsible because he was using that instrumentality, which might be dangerous if carelessly used, the gun?"

The dissenting opinion held in part:

"While a powerful automobile may not, strictly speaking, be deemed a dangerous instrument, it may become so if recklessly driven. They are so dangerous that the Legislature has prescribed that their ownership must be registered and the driver licensed, and that speed in different localities must be regulated. The defendant recognized this when he instructed his servant to be careful on the trip which he permitted him to make. If a railroad official should loan a locomotive to one of the company's engineers for the purpose of hurriedly visiting a distant locality, it could hardly be said that the engineer alone would be liable for injuries inflicted upon third persons."

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CEYLON PLANTATIONS NEED CARS

They Must be Good Hill Climbers, Says Consul Creevy—Peculiarities of the Cingalese Roads.

Although Ceylon at present boasts but one American made automobile among the 200 or more cars which are in use upon its highways, American Consul E. A. Creevey, of Colombo, sees possibilities in the market which are not to be ignored. Incidentally, he furnishes some advice which is of general value to exporters trading in other fields of commerce with foreign countries as well as to the possibilities presented by the tea and rubber producing island in the Indian Ocean.

"At present there are a few less than 200 automobiles in service in Ceylon, only one of them of American make," he remarks. "It would appear that there is need for several hundred more machines here, but whether the need would be recognized by those expected to purchase is a question. The field which, it is believed, could be developed profitably by automobile manufacturers, lies in the tea and rubber estates, of which there are about 1,200 on the island. Each estate needs an automobile, but as yet very few of the proprietors have taken steps to meet the want.

"The machine required in Ceylon should be a good hill climber, of moderate cost, and economical in operation. The vast majority of the plantations are situated in the mountains, and are reached by narrow, almost spiral roads, with heavy grades and sharp turns. It should be simple of operation and so constructed as to respond quickly to the touch of the chauffeur, as the driver of a car on a Ceylon mountain road is liable at any instant, in making a sharp turn, to find himself confronted by a heavily laden buffalo cars occpying the whole width of the road, and with a rocky wall on one side and a precipice on the other. The Colombo price of gasolene is 50 American cents per gallon, hence a successful car in Ceylon would necessarily be one using the minimum of that fluid.

"If the American automobile manufacturer entertains the idea that his machine may be sold in Ceylon by catalogue, let him dismiss that idea forthwith. Automobiles may be sold here only as the result of demonstration. The manufacturer, though he be thoroughly satisfied of the excellence of his car, cannot expect a contemplating purchaser, 10,000 miles or more removed from the sight of that car, to understand its capability as he does himself, with nothing but a printed catalogue to guide him. He should remember that in the development of his car he himself refused to accept the statement of his factory foreman as to the performance of any part of it, and was convinced of the truth only after the car had been taken out over the road and the working of the part referred to demonstrated.

"The American automobile manufacturer contemplating the capture of the Ceylon market should begin by sending out a representative and a fair sample of his machine, authorizing his representative to assure a purchaser that a supply of parts would be kept at Colombo. This last consideration is essential in the case of a machine the various parts of which are not standardized, as it is not to be assumed that a resident of Ceylon would knowingly place himself at the disadvantage of having to wait for a substitute part of his machine, in case of damage by accident, to be shipped from the United States."

Safeguard Against Leaky Pipe Joints.

To ensure permanence and positive avoidance of leakage, it is recommended by a foreign expert that pipe joints which are to be closed with asbestos-lined copper gaskets, be made up with a paste of graphite or black lead, and boiled oil. In this connection care should be taken not to daub the mixture on any threaded portions of the joint or its connections, as the paste becomes very hard after it has been permitted to set.

MICHELIN

FRANCE, ENGLAND, ITALY, AMERICA.

GRAND PRIX

Heavy Cars, July 7, 1908

	CAR	DRIVER	
1st	Mercedes	Lautenschlager	Michelin Tires as usual
2nd	Benz	Hemery	Michelin Tires as usual
3rd	Benz	Henriot	Michelin Tires as usual
4th	Bayard-Clement	Rigal	Michelin Tires as usual
5th	Mercedes	Poegge	Michelin Tires as usual
7th	Benz	Erle	Michelin Tires as usual
8th	Renault	Dimitri	Michelin Tires as usual
9th	Panhard	Heath	Michelin Tires as usual
10th	Germain	Perpere	Michelin Tires as usual
11th	Itala	Cagno	Michelin Tires as usual
12th	Bayard-Clement	Gabriel	Michelin Tires as usual

Michelins not only Won the Grand Prix, first and second day, the Targa Florio, at Briarcliff, Savannah, Ormond, Jamaica, and Elkwood Park—ALL the big events of this year—but EVERY world famous event since motor racing began

MICHELIN TIRE COMPANY

MILLTOWN, N. J.

NEW YORK, 1763 Broadway
CHICAGO, 1344 Michigan Ave.
DETROIT, 247 Jefferson Ave.
DENVER, 15 East Colfax Ave.
BOSTON, 895 Boylston Street
BUFFALO, 908 Main Street
SAN FRANCISCO, 308 Van Ness Ave.
CLEVELAND, 2001 Euclid Ave.

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VILLAGE COP SHOOTS UP A CAR

One of His Bullets Hits a Female Passenger—War Between Chicago Club and the Town Officials.

There is a duel on—if not "to the death," it threatens the penitentiary—between the Chicago Automobile Club and the village authorities of Glencoe. Of course, neither of these two bodies would be consigned to the gloom and hardships of prison life should the battle be to the possible finish; but they would be represented in the one case by T. P. Henderson, a member of the club, and in the other by Frank Moore, a special policeman, employed, with several others, by the village to enforce the automobile speed regulations on Saturdays and Sundays.

Henderson was passing through Glencoe in his motor car on Sunday, 12th inst., with several friends as passengers, his route leading him into a "trap" whereat Moore was the presiding genius. He failed to bring his car to a stop when commanded so to do and the cop proceeded to unlimber his shooting iron and make a target of the vehicle. One result of his little "schuetzenfest" was that one of the bullets, undoubtedly intended for the tank, struck Miss Buena Stribling, who was among Henderson's guests in the car, and she escaped injury only through the remarkable good fortune of wearing a pearl button on the spot where Moore's leaden messenger landed and glanced off.

As a sequel to this near tragedy the village authorities of Glencoe have threatened to put Henderson into the penitentiary for an "assault with intent to murder," while the Chicago Automobile Club has determined to prosecute Special Policeman Moore and qualify him for wearing a prison suit because of the shooting of Miss Stribling. Both sides will make a vigorous defense of the respective defendants in the proceedings, and it is evident that there is an abundance of acrimony to give to the trials a gingery tone. The village will base its serious charge against Henderson on the statement of Special Policeman Moore, who declared that when he stepped out into the middle of the road, showed his star, and ordered Henderson to stop, he neither slowed up nor turned out, but headed his machine straight for the officer. The policeman says he dodged out of the way just in time to escape being run down and that he fired two shots in the air before he aimed at the gasolene tank and fired the shot which hit Miss Stribling.

"The aiming of a large automobile going at the rate of over 20 miles an hour at an officer of the law in the discharge of his duty certainly is an assault with intent to kill," said Village Attorney Morton T. Culver, of Glencoe. "It is especially reprehensible when it is considered that it was done by a man charged with crime and a man several times convicted of crime. We are going to swear out a warrant for his arrest charging him with a felony, and we are going to try to send him to the penitentiary as a warning to reckless motorists."

On the other hand, Henderson declares that Moore's act was a "clear case of a policeman's officiousness," and he adds: "It was a regular hold-up. We were not violating the speed ordinance, so there was no reason why we should have stopped to satisfy the whim of the policeman. The speed limit in Glencoe is, I believe, 15 miles an hour. We were running at less than a 12-mile rate, and I knew it positively, so I paid no attention to the wave of the officer's hand."

In support of Henderson's declaration a number of other automobilists have declared that the village of Glencoe is practically "frying fat" out of the motorists, President Ira M. Cobe, of the Chicago Automobile Club, going so far as to openly invite prosecution for slander involved in his unqualified assertion that the whole thing is a matter of graft between the special policemen and Justice of the Peace M. T. Lane. In fact, some of the automobilists who hope to send Moore to the penitentiary hope to involve Lane also in the disaster, and to deprive him of his commission even if they fail to send him to prison.

It is asserted that the village of Glencoe makes a very good thing out of its war against motorists. Since January 1st there have been 76 automobile arrests, in which total fines of $1,230.50 have been imposed. During the six months between January 1 and July 1, the regular salary paid to the village attorney—a retainer of $20 a month—and $55 a month to Policeman Dennis—the one regular officer—amounted to $450. In addition approximately $200 was paid out during May, June and July to Frank Moore, J. R. Culver, Roland Herfurrd. James Brandl, L. C. Conrad and Harry Ford, who acted as special policemen on Saturdays and Sundays in the campaign against the motorists. The special men were paid at the rate of $10 a day, while they served, so it is evident they are expected to pay for their "salt."

Palestine to Have Automobiles.

As a result of the first practical example afforded Palestine of the success of the modern motor car, a great deal of local interest has been aroused, and several people are planning to purchase cars, it is reported by the American Consul at Jerusalem. The "demonstration," which was wholly incidental to the pleasure tour taken by a party of American travelers, passed off successfully, even roads that had been pronounced impassable to the car being traversed without difficulty. In order to enter the sacred precincts of the Holy Land, it was necessary to obtain permission from the Turkish Imperial Government.

NEWARK CLUB AVOWS LOYALTY

Rumors of Probable Secession from State Federation Set at Rest—Fight Against Frelinghuysen Law Approved.

Rumors current to the effect that the New Jersey Automobile and Motor Club of Newark contemplated withdrawal from the Associated Automobile Club of New Jersey were finally set at naught by action taken by the board of trustees on Thursday evening, 16the inst. The meeting was an extended one, and all the matters included in the rumors, including one to the effect that the members of the club disapproved of the movement to test the Frelinghuysen law, finally were disposed of by the adoption of the preamble and resolutions which follow:

Whereas, Statements have recently appeared in the press representing that the New Jersey Automobile and Motor Club was about to sever its relations with the Associated Automobile Clubs of New Jersey and also its relations with the American Automobile Association, and

Whereas, Statements have also appeared that this club was not in accord with the policy of the Associated Automobile Clubs of New Jersey in testing the constitutionality of the law; therefore be it

Resolved, First, That this club is and always has been loyal to the Associated Automobile Clubs of New Jersey and expects to remain so, believing that the fundamental principle of organization is absolutely necessary for the success of all undertakings.

Second, That this club is in hearty accord with the management of the American Automobile Association and has no intention whatever of severing its relations with the association, but desires to co-operate with it in its efforts to better automobilists and automobile interests.

Third, That this board is in hearty accord with the proposed suit to test the constitutionality of the law, and to subscribe its necessary pro rata share of the expense of same in compliance with the wishes of the members of the club as expressed by a resolution unanimously passed at the annual meeting of the club on May 4, 1908.

Fourth, That copies of these resolutions be sent to the secretaries of the American Automobile Association and Associated Automobile Clubs of New Jersey, and to the press.

Rockefeller to Become a Real Tourist.

The opportunity of selling him his own gasolene at outrageous rates may be presented to those garage men who are fortunate enough to be called upon to replenish John D. Rockefeller's touring car, which it is thought he is going to use for a more or less extensive trip this summer. Heretofore the oil king has confined himself chiefly to runabouts and limousines, but the recent purchase of a White steamer, of the strictly touring car pattern, coupled with a request to the White touring bureau for maps, road data, and license information, has given rise to the belief that he is going to become a real automobile tourist.

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The Week's Patents.

886,701. Change Speed Gear. Peter Hesselius, Chicago, Ill. Filed March 5, 1907. Serial No. 360,651.

1. In a variable speed power transmitting device, the combination with a driving shaft, and a driven shaft, of means for imparting rotation from said driving shaft to said driven shaft, said means comprising a plurality of gear wheels mounted for separate rotation on one of said shafts and means for non-rotatively securing said gear wheels to their shaft, said latter means comprising a radial notch in the bore of each gear wheel, radially movable keys mounted in the shaft, and a longitudinally movable bar mounted in the shaft and provided with a slot adapted to receive said keys.

886,738. Transmission Gear Casing. Angelo Tedeschi, Milan, Italy. Filed July 10, 1907. Serial No. 383,085.

1. In a gear casing for draft gears, a continuous frame adapted to encircle the gears, and a light sheet metal cover inclosed and supported by the frame.

886,760. Carburetting Mechanism for Internal Combustion Engines. Alanson P. Brush, Detroit, Mich. Filed Feb. 3, 1906. Serial No. 299,281.

1. In a fuel feeding device for internal combustion engines provided with a mixing chamber or air passage, a fuel reservoir discharging into the mixing chamber, a valve for controlling the discharge of the fuel into the mixing chamber, a balanced air valve for controlling the admission of air into the mixing chamber for atomizing the fuel, and means to adjust said air valve to vary the quality of the mixture at low speeds without materially varying the quality of the mixture at high speeds.

886,835. Means for Attaching Pneumatic Tires. Amos C. Miller, Chicago, Ill. Filed Aug. 23, 1905. Serial No. 275,423.

1. The herein described means for securing a pneumatic tire to a vehicle wheel, comprising a metallic wheel rim having a circumferentially depressed tire seat centrally located, a marginal inclined or beveled seats in combination with a pneumatic tire having a base portion adapted to said central seat and lateral flanges adapted to said inclined seats, and contractible retaining bands seated upon said flanges and adapted to clamp the base and flanges to their respective seats, substantially as described.

886,911. Variable Speed Gear. William Wolter, Burress, Neb. Filed Oct. 4, 1907. Serial No. 395,901.

1. In a friction transmission gear, a driven shaft, and plurality of driving shafts arranged around the same, a cone upon the driven shaft, oppositely disposed cones upon the driving shafts, interposed discs between said cones, and means for shifting said discs longitudinally of the cones, substantially as described.

886,990. Motor Driven and Steered Fore Carriage for Automobiles. Louis Krieger, Paris, France. Filed Jan. 10, 1906. Serial No. 295,502.

1. In a vehicle, the combination, with an axle, and an axle sleeve pivoted to the axle and provided with hub-bearings at each side of the pivotal point, of a wheel having a hub journaled upon the said hub-bearings, a motor carried by the axle sleeve, and gearing intermediate the wheel and motor whereby the wheel is driven.

887,001. Transmission Mechanism. Louis E. Mahout, Paris, France. Filed Jan. 22, 1906. Serial No. 297,193.

1. An apparatus for the transmission of motion applicable to automobiles, characterized by the combination of two cones, arranged in front of one another, a shaft upon which the driven cone is slidably mounted, a belt connecting the two cones, two pinions of different diameters movable along the shaft of the driven cone, a driven shaft, and two toothed wheels carried by the driven shaft and with which the two pinions can be thrown into mesh, substantially as described.

887,002. Cushion Attachment for Automobiles. James E. Marriner, Newton, Mass. Filed Jan. 7, 1907. Serial No. 351,130.

1. The combination with a longitudinal supporting bar of a vehicle body, the axle, and a spring secured at its center to the upper face of the axle and having its ends secured to said bar, of a socket block secured upon the upper face of the spring directly above the axle by the means securing the spring to said axle and having a hollow piston projecting upward therefrom, a second socket block secured to the lower face of the supporting bar and having a cylinder projecting downwardly therefrom freely receiving the piston, a cushion ring between the socket blocks and surrounding the piston and cylinder of the socket blocks, and toggles connecting the socket blocks at diametrically opposite sides, between the supporting bar and spring.

887,013. Hydrocarbon Engine. James W. Packard and William A. Hatcher, Warren, Ohio, assignors, by mesne assignments, to Packard Motor Car Company. Filed Feb. 12, 1902. Serial No. 93,755.

The Dependable Quality of the

F & S

ANNULAR BALL BEARINGS

is emphasized by the following recent performances:

PRINZ HEINRICH TOUR
(Germany)

The BENZ car driven by Mr. Fritz Erle, awarded First Prize, was F & S mounted.

GRAND PRIX
(France)

Four of the first seven cars to finish were F & S mounted.

J. S. BRETZ COMPANY
Sole Importers
TIMES BUILDING. NEW YORK

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1. In an explosive engine, the combination with the cylinder of a water jacket surrounding the cylinder and securely connected at its ends to the ends of the cylinder, said water jacket having a series of transverse or annular corrugations, whereby opening of the joints between the jacket and the cylinder due to relative expansion and contraction is prevented.

887,117. Shock Absorber. William Parfrey, New York, N. Y. Filed Dec. 28, 1906. Serial No. 349,781.

1. A shock absorber comprising a shaft, a toggle joint connected therewith, and springs on said shaft adapted to limit the movement of said joint in either direction vertically.

Studebaker

RECORD FOR JUNE

Perfect Score In the 24 hour endurance contest at San Leandro, Cal., under the auspices of the Frisco Automobile Club, a Studebaker "30" Model H stock car finished with a perfect score, and was the only contestant to run the entire 24 hours without stopping its motor.

Perfect Score In the Wilmington, Delaware, Sealed Bonnet Contest, held June 27th, a Studebaker "30" entered, finished with a perfect score.

Perfect Score In the Stroudsburg, Pennsylvania, Endurance Run, June 27th, the Studebaker "30" finished with a perfect score.

Studebaker Wins In the Hundred Mile Road Race at Portland, Oregon, June 4th, over a 14.5 mile course, the two Studebaker cars entered won first and second place in competition with ten other cars. The winning Studebaker covered the 100 miles in 2 hrs. 4 min. 8 sec.

Studebaker Wins June 27th, in the Hill Climb at Delaware Water Gap, Pennsylvania, the Studebaker made the mile climb in 2 min. and 2 sec., winning the event.

Complete map of Glidden Tour just out. Write for it to-day.

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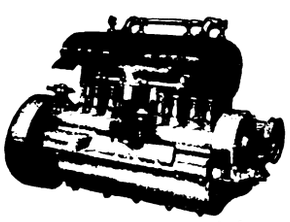
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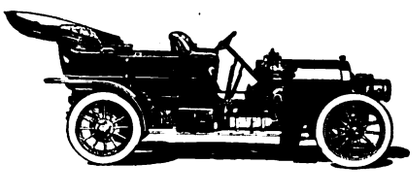
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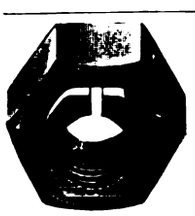
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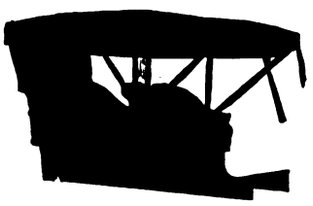
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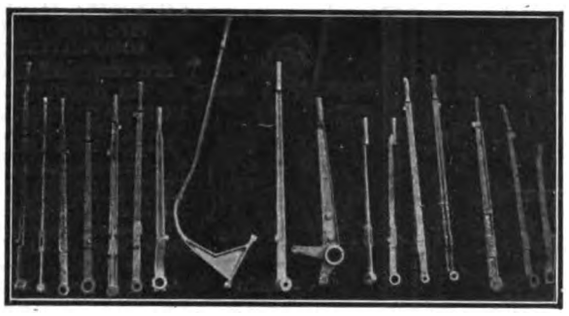
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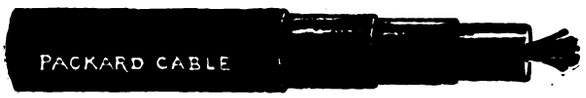


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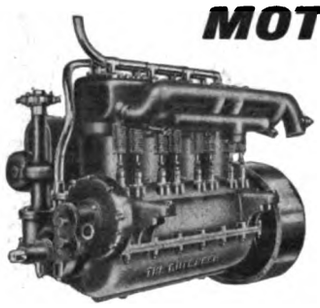
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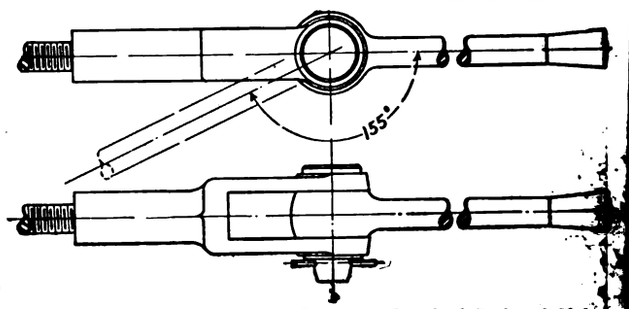
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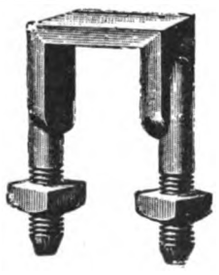
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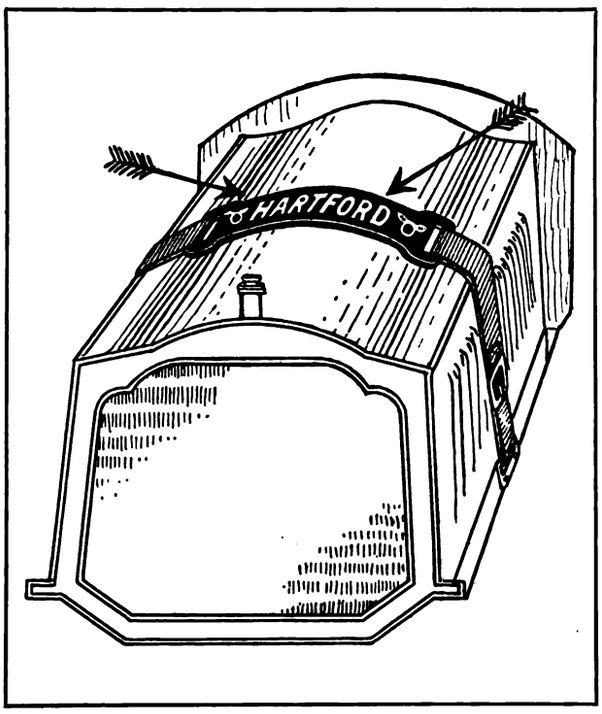
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ANTI-RATTLING DEVICE FOR THE HOOD

"It's a Good Thing"

The following is from the *New York Globe*, of July 10th, 1908:



"Necessity is the mother of invention," and the latest idea added to necessity's list is a simple little device now being placed on the market by the Hartford Rubber Works Company, known as the Hartford hood anti-rattler.

The average automobile owner has noticed the rattling of the hood on his car, and while it is but a little thing and does not reflect on the construction or durability of the machine, it is annoying. To obviate this many owners have placed a strap across the center of the hood, fastening it as tightly as possible.

The Hartford hood anti-rattler goes a step further. It is a strip of flexible rubber about a foot in length, a couple of inches in width, and about one-quarter inch thick, slotted at either end. When placed over the center of the hood the ends of the leather straps are drawn through the openings in the rubber strip at either end and then buckled down firmly on the side of the hood. This not only holds the hood in place positively, but on account of the elasticity of the rubber takes up whatever vibration there may be and also deadens the noise.

This article is neatly lettered with the word "Hartford," and shows the winged wheel, the trade mark of the company. It is made of a fine grade of rubber, fast black in color. Patents have been applied for.



THE PRICE OF THE HARTFORD ANTI-RATTLER IS $1.50

HARTFORD TIRES
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TRADE MARK

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1669.7 Miles

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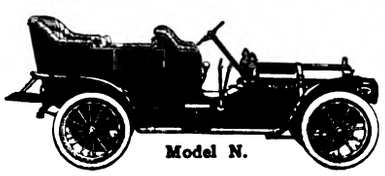
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Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.


Model N.

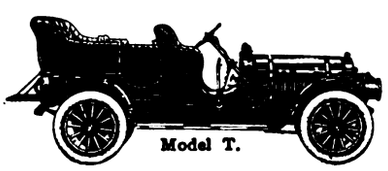
Model K—4 cyl., 4⅞ x 5
$3,500

Model N—4 cyl., 5x5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½x4¾
$4,200

Model T—6 cyl., 5x5
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Model T.

Write for particulars and our Booklet "What Owners Say About Their Nationals."

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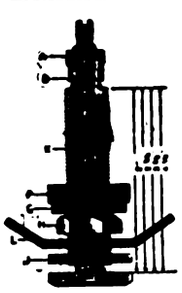
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SIMPLE AND ABSOLUTELY AIR TIGHT



¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

¶ Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by **A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York**

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Large Sales

make it possible for us to import **THE CELEBRATED BRAMPTON CHAINS** from **ENGLAND** (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped **"BRAMPTON."**

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL**, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller	$1.00 per foot.
1 x ⅝ x ⅝ roller	1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for **BRAMPTON CHAINS**, and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo. 202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

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AJAX
WRAPPED TREAD TIRES

After all is said
and done,
no matter how
glowing
the promises of
tire makers,
the only thing you have
to tie to
is
the word
of the dealer who
sells you.

If the tire
goes bad
you have the privilege
of carrying on
one end
of a controversy
with the factory—
that's all.

The tire maker
makes good—or doesn't
as he sees fit.

There's one exception—
AJAX—

Every AJAX tire
is guaranteed
for 5000 miles.

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.
BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodward Ave. — Los Angeles, 1040 S. Main St.
Agents in all large cities.

THE STEPNEY
Spare Motor Wheel

ON AND GONE IN LESS THAN A MINUTE



Punctures and other tire troubles have no terrors for the motorist whose car is equipped with the **STEPNEY WHEEL.** If a tire goes wrong it is only the work of a moment to attach the **STEPNEY WHEEL** and be off again with no further delay.

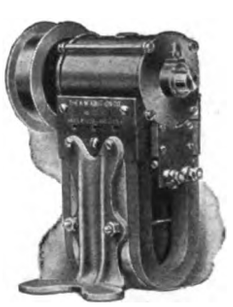
Isn't it worth having, for the peace of mind alone that it brings?

Write for Catalogue D.

Spare Motor Wheel of America, Ltd.
236 Michigan Avenue, CHICAGO, ILL.

THE K-W MAGNETO
Model F

Has bracket as shown for attaching to frame of car. Made especially



For Ford Runabouts
Good on any car.

High in Quality—Low in Cost
Perfectly Reliable—Easy to Apply
More Power—Less Fuel

Price $35.00

It starts the engine easily without batteries and runs it faster and better than any battery because it gives a hotter spark. They run in ball bearings and have no moving wires or brushes to give trouble and wear out. They are made to last and they do last. They are the cheapest that is good and there is nothing better at any price.

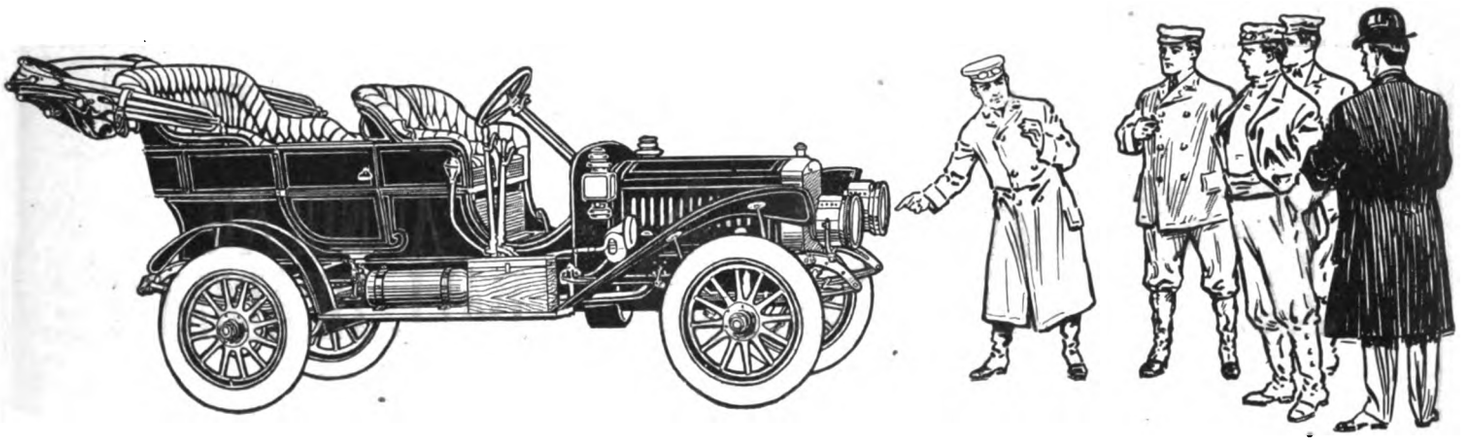
We also make high grade Coils and Plugs and the K-W Master Vibrator. Get our catalogue.

THE K-W IGNITION COMPANY
38 Power Avenue, CLEVELAND, OHIO

REPRESENTATIVES:
A. H. GREEN & CO., 1686 Broadway, New York.
W. J. FORBES, 220 Congress St., Boston, Mass.

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What a Chauffeur Knows About Automobile Prices



THERE'S going to be a grand wakin' up some day soon on automobile prices. I'm next to the game and I *know*," said a chauffeur.

He was proudly extolling the virtues of his car to his professional brothers.

"What's the use of paying from $3000 to $5000 for a motor car?—that's what I'd like to know.

"You've got to show *me* where you fellows' cars puts it over the Mitchell.

"*I've* driven your foreign cars that cost their owners $3000 duty *alone*, and I've driven *American* cars like *Johnson's* there and *Dorsen's* that set their bosses back $3000 and $5000.

"I've *lived* in cars like *them*—*slept* in 'em—driven 'em all day long—through rain storms and over roads that were *fierce*.

"I've babied 'em up hills that they absolutely refused to take on the high.

"I've taken 'em down and put 'em together in the garage.

"I *know* 'em—know 'em *all* from radiator to tail-light and if you fellows think you can *'show me'* just where your cars have got *The Mitchell* skinned, come out on the road with me and let's *see* if you can,

"The boss paid $2000 for *this* car. She's got four of the smoothest cylinders *you* ever saw and she's got *horse-power*—35—and she's done better on hills and under all road conditions than any 50 h. p. $5000 cars *I* ever saw, and I've driven 'em all and run up against *every test you can name*.

"*Your* bosses may like to pay $5000 for a car but *mine* was *wise*.

"You know there's a good *many* men in this country that shut their eyes tight on $2000 cars merely because they take it for granted that a $5000 car ought to be $3000 *better*. It *ought* to be all right—but *is* it?

"I want the chauffeur that *thinks* his car is $3000 better than the Mitchell to *prove up* with me—in *speed* or *power* or *hill climbing* or *any* old thing he thinks he's *better* at—*that's* all.

"*Yes* sir, if a man's in doubt about the *car* he wants, let him do what my *boss* did—make a 50 or a 500-mile *test* in a *Mitchell*.

"Any agent will take him out if he's interested in gettin' a car.

"That'll 'show him' what it showed my boss—and save him about $3000.

"Beg pardon, sir? Why, yes sir—write to the Mitchell Motor Car Company, 284 Mitchell St., Racine, Wis., and send 10c. for Art Catalog.

"Well, any of you fellows comin' out? I've got ten dollars in my pocket that says The Mitchell ain't $3000 behind *anybody's* car."

Standard Manufacturers
A. M. C. M. A.

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NEW YORK-PARIS RACE

The Most Severe Test Bearings Were Ever Subjected To.

F & S ANNULAR BALL BEARINGS

CARRY THE PROTOS CAR 21,080 MILES WITHOUT DEVELOPING A SINGLE DEFECT

POSTAL TELEGRAPH **COMMERCIAL CABLES**

CLARENCE H. MACKAY, PRESIDENT.

CABLEGRAM

REGISTERED TRADE-MARK. DESIGN PATENT No. 30000.

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397 BROADWAY.

(WHERE ANY REPLY SHOULD BE SENT.)

190

From Schweinfurt July 27/08

Bearing Ny (J S Bretz Co, Room 1004 Times Blg)
Protos car arrived first in Paris. made world record race.
20000 kilometer on our bearings without any defect.

FICHTEL & SACHS.

No Inquiry respecting this message can be attended to without the production of this paper. *Repetitions of doubtful words should be obtained through the Company's offices, and not by DIRECT application to the sender.*

This Demonstrates the Superiority of

THE DEPENDABLE KIND

The leading cars of Europe and America are equipped with F. & S. BEARINGS

J. S. BRETZ COMPANY, Sole Importers

TIMES BUILDING, NEW YORK

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Mongrel or Thoroughbred?

NOW IS THE TIME for you, Mr. Thoughtful Dealer, to decide what you will sell in 1909.

WILL IT BE A MONGREL? a car assembled from parts carried together from all over the country and hammered into shape as well as may be?

OR WILL YOU SELL THE THOROUGHBRED—a homogeneous mechanical masterpiece, every single part of which is the result of the same genius that devised the whole?

"ASTOUNDING," "MARVELOUS," "WONDERFUL," are the terms with which some assembled cars are now tagged, though they are astounding, marvelous and wonderful only to the assemblers, who like Rip Van Winkle, have been dozing in the growing woods of automobiledom and who now, bewildered by the progress that has been going on, seize upon time-tried and long-established practices and herald their adoption by the assemblers as brand-new discoveries.

LET'S REASON IT OUT: On the one hand you have the assembled car, with an engine bought from one manufacturer, a frame from another, and a transmission from a third, and so on down to the last rivet. The maker of the engine, the mill in which the frames are pressed, the transmission man, all derive their separate profits, leaving no other way to the assemblers to obtain their rewards than by skimping the quality of their "product."

AND THEY DO IT—THEY MUST! When you examine some of these astounding cars you will be truly astounded on finding that the four-cylinder engine is cast in one piece and has only two main bearings, whereas the Maxwell has four cylinders and five main bearings. You know well enough that making a motor with only two bearings is equal to leaving the engine to its own devices as far as alignment is concerned.

IT WILL BE A TOUGH JOB FOR THE DEALER to convince the purchaser who is wise that some four-cylinder engines of small dimensions will develop as high as 30 horsepower—because they can't.

MAXWELLS ARE A HOME-GROWN AMERICAN PRODUCT. The use of Maxwell features in Maxwell cars was neither a heaven-given inspiration nor the aping of foreign design, but the outcome of sound engineering sense.

WHEN 10,116 MAXWELL OWNERS testify to the excellence of their cars, all of which have been sold by Maxwell dealers, then the Maxwell proposition is one that you can't afford to pass by.

BEFORE HITCHING YOUR WAGON TO A STAR it will be wise for you to find out all about a dealership for Maxwells, the success of which is past and present, instead of lying in the dark and distant future that has swallowed so many wonderful cars that have been marvelous chiefly in their complete and rapid disappearance from the field of legitimate competition.

Benj. Briscoe
President.

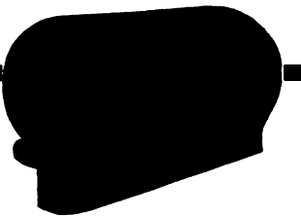
MAXWELL-BRISCOE MOTOR CO.

Standard Manufacturers A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

Address communications to Tarrytown, N. Y.



Comparison is Proof Positive

Equip one wheel of your auto with a

"Firestone" TIRE

"The Tire of Sterling Quality"

Compare its wearing quality with that of the other tires.

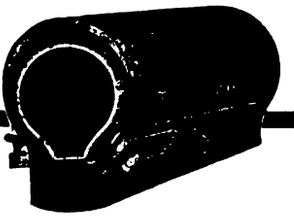
We urge you to do this for it will convince you that "Firestones" are the tires you should use—and you will be ever thankful for this hint.

TRY IT NOW!

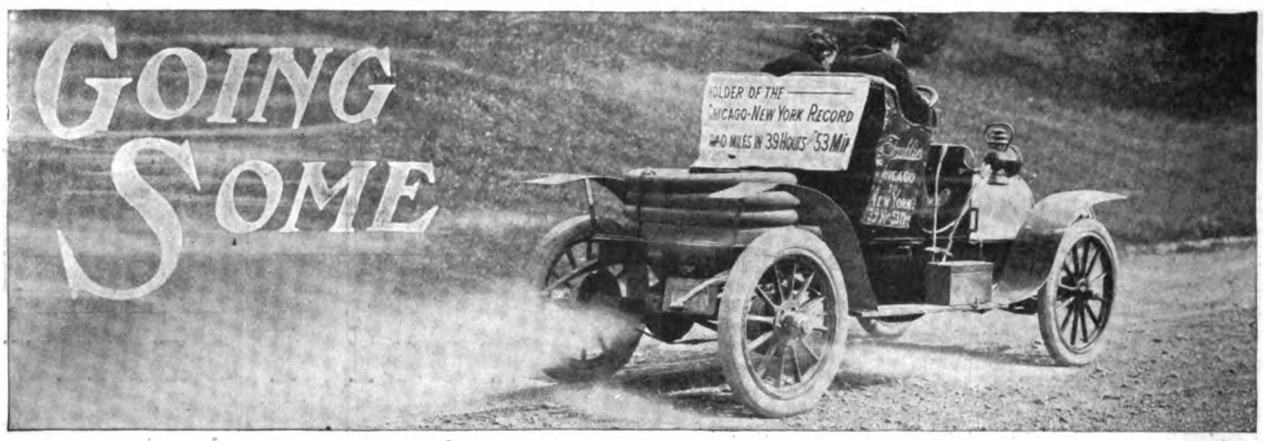
Branches and Agencies Almost Everywhere.

Firestone Tire & Rubber Co.

AKRON, OHIO



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The above is from a photograph of the Franklin Model "D" Runabout, which lowered the Chicago-New York Record to 39 hours, 53 minutes, with an average speed of 20 miles an hour over 1,060 miles, including stops for supplies. From Cleveland to Buffalo, a distance of 214 miles, this car beat by one hour the Chicago-Boston-New York Express, which carried the relief relay of drivers.

Just how much the

TIMKEN ROLLER BEARINGS AND STEERING KNUCKLES

with which this car is equipped, had to do with making this record can be reckoned by adding up: The elimination of all friction—Saving in wear and tear on the engine, and the faith of the drivers that **TIMKEN PRINCIPLE AND TIMKEN QUALITY** insured them against break-downs and accidents. More than 60% of all the manufacturers of High Grade Automobiles equip their best cars with TIMKEN PRODUCT—There must be a reason. If you would like to know WHY, write us.

THE TIMKEN ROLLER BEARING AXLE COMPANY, Canton, Ohio

Branches: 10 East 31st Street, New York. 429 Wabash Avenue, Chicago.

MORGAN & WRIGHT, DETROIT

are making a 33 x 4 tire which can be applied on a 32 x 3½ rim, and a 31 x 4 tire for use on a 30 x 3½ rim.

GET PARTICULARS AND PRICES

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DOW TUBES

(The Best Tubes Ever Manufactured)

make a

PERFECT SCORE

in the

GLIDDEN TOUR

Dow Tire Company, Saratoga, July 23, 1908.
2000 Broadway,
New York.

I have run through the entire Glidden Tour with my Stoddard-Dayton Car, No. 107, with practically no tire trouble, using Goodrich casings and Dow Non-Deflation Tubes.

The front wheels have the same casings and Tubes with which I started, and I have not even had a pump to them since they were first inflated.

The right rear wheel has had two shoes, one having been worn to the fabric by sliding the wheels through braking on water breakers, and the same Dow Tube is in the second shoe.

The left rear wheel had the casing terribly cut by a bottle and blew out. A new casing with Dow Tube was put in and is still running perfectly.

(Signed) G. P. MOORE.

All Live Dealers Sell Dow Non-Deflation Tubes

DOW TIRE CO., 2000 Broadway, New York

889 Boylston St., Boston. 506-8 N. Broad St., Philadelphia

DRAIN or GULLY



Whether or not you are warned by signal that you are approaching a drain or gully—be warned that

WEED CHAINS

are necessary when you are negotiating in mud or sand—and on wet, slippery streets. They grip and hold the wheels to the road. They positively prevent skidding or slipping on greasy and wet pavements. They preserve tires and enable the heaviest automobile to climb hills easily. They prevent lost traction and save gasolene consumption.

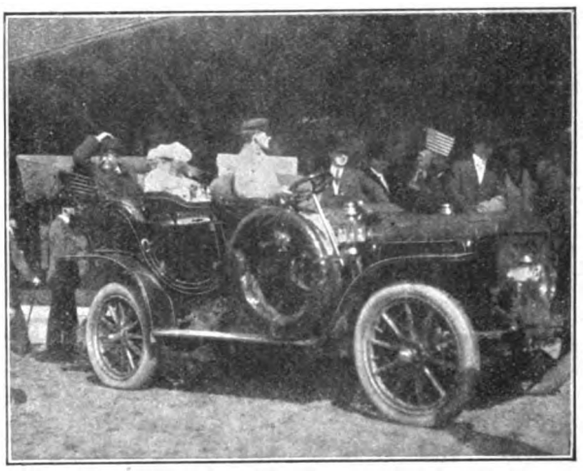
Fit any standard tires; are readily attached and detached. Write for Bulletin

WEED CHAIN TIRE GRIP COMPANY

35 Moore Street, New York

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Write for White Bulletin No. 15

The above illustration is reproduced from the new White Bulletin No. 15, an attractive little booklet devoted to some of the more important automobile events of the last few months. The leading articles are "The New Road Record Between San Francisco and Los Angeles," "The Fort George Hill Climb," "The Quaker City Reliability Contest" and "The Harrisburg Reliability Contest." In addition to these four detailed accounts of White victories, brief space is given to the numerous minor contests in which the White has carried off first honors; also, the activities of private owners of White cars and the doings of "Government White Steamers" in this and other countries receive attention. We believe that you will find this booklet of interest.

A POSTAL TO US BRINGS A COPY

THE WHITE COMPANY

CLEVELAND, OHIO

PITTSBURG, 138-48 Beatty St. ATLANTA, 120-122 Marietta St.
SAN FRANCISCO, 1460 Market St. CLEVELAND, 407 Rockwell Ave.
NEW YORK CITY, Broadway at 62d St. BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St. CHICAGO, 240 Michigan Ave.

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Rambler



Model 31, Price $1,400

Other Models, $1,000 to $2,500

YOU can do all kinds of work with this car as a handy Runabout without the tonneau; then put the tonneau on and take your family or friends for a ride in a roomy Five-Passenger Touring Car.

Many exclusive features make it the most remarkable two-cylinder car in this country selling at $1,400.

The powerful engine makes it a hill climber; the long wheel and full elliptic springs provide great comfort; you glide over rough roads without a jar.

It. is easy to care for and always clean because of the few moving parts and the enclosed power plant, impervious to dirt, mud and water, and oil tight with proper lubrication.

Immediate access to every working part is provided. The low cost of maintenance is due to simple construction, small fuel and oil consumption and protection of parts against injurious road material.

THE CAR OF STEADY SERVICE

A Postal will bring you the facts.

Please write your name and address and "Model 31" on a postal and mail to us today. You will not obligate yourself in the least

THOMAS B. JEFFERY & COMPANY, Main Office and Factory. **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, July 30, 1908. No. 18

MAMMOTH MERGER IN PROSPECT

Buick and Maxwell-Briscoe Companies Reported to be Arranging a Ten Million Dollar Combine.

A merger of the Buick Motor Car Co., of Flint, Mich., and the Maxwell Briscoe Motor Car Co., of Tarrytown, N. Y., and Newcastle, Ind., is at present in process of formation, according to reports from Detroit. No announcement of the merger has as yet been given officially, but the plans that have so far leaked out provide for a capitalization of $10,000,000 for the combined companies, an increase of $6,000,000 over the total capitalization of the companies separately.

The Buick company is capitalized at $2,000,000 common and $500,000 preferred, and the Maxwell-Briscoe company at $750,000 common and $750,000 preferred. For the past three months there has been considerable activity in the stock of both concerns, the Buick common advancing from 90 to 125, and the Maxwell-Briscoe combined from 145 to 165. There has not been much trading in the Maxwell-Briscoe stock, however, because of the fact that it is so closely held. It is thought that the old stock will participate in the division of the increase.

A report that the underwriting of the combine would be in the hands of J. P. Morgan & Co., has been officially denied by that concern. President Durant, of the Buick company and Richard Irvin, treasurer of the Maxwell-Briscoe company, have been in frequent conference this week, it is said, arranging the details of the transaction.

"Blue Cabs" to be Made at Bristol.

In order to make taxicabs and parts for the new American Taxameter Cab Co., the $1,500,000 concern whose stock flotation was announced in last week's Motor World, several of the men interested in the company have started an enterprise in Bristol, Conn., which is to be known as the Bristol Engineering Co. The organizers are Albert F. Rockwell, president of the New Departure Mfg. Co.; De Witt Page, secretary of the New Departure Mfg. Co., and F. E. Moskovics. Both Rockwell and Moskovics are directors in the cab company, of which Moskovics is also the engineer. While final organization papers have not as yet been filed, Rockwell has been chosen president; Page, vice-president, and Moskovics secretary-treasurer.

Would Put Aurora in Bankruptcy.

Bankruptcy proceedings against the Aurora Motor Works, of Aurora, Ill., have been commenced. Efforts are being made by some of the creditors to have a trustee appointed to carry the business forward, to sell the unfinished goods and to fulfill existing contracts. It is also thought possible that certain original stockholders can be persuaded to place a large amount of money in the treasury as the balance due upon the stock not paid in full. If this is done and manufacturing and selling continued for a reasonable time, the creditors will lose nothing.

Berkshire Receivership Holds.

The motion to have the receivership of the Berkshire Motor Car Co., of Pittsfield, Mass., dissolved has been overruled by Judge Bishop at Pittsfield. Attorney George A. Prediger urged the motion on behalf of the company, but opposition was presented by Attorney Joseph W. Lewis on the ground that the petitioners for the receivers should be given proper consideration.

Muncie Parts Sues Bartholomew.

The Muncie Auto Parts Co., of Muncie, Ind., has filed a praecipe in the United States court at Peoria, Ill., in a suit for $15,000 against the Bartholomew Co., automobile manufacturers in Peoria. The suit is brought by the receiver of the Muncie company, and is the result of a dispute three or four years old. Each side claims that the other owes it money.

POPE REORGANIZATION PLANS

Creditors to be Paid in Full and a New Company Created—Reduced Capitalization.

A complete reorganization of the Pope Mfg. Co., by which the creditors will get 100 cents on the dollar for their claims, together with 6 per cent. interest, is under way and will probably be completely effected before November. Since the Pope company went into the hands of the receivers one year ago, it has by their excellent management been brought to a point where its affairs will permit of all the creditors being paid in full; and the subsequent reorganization, underwritten by New York and Hartford bankers, with the co-operation of the principal stockholders, will once more place the concern to the forefront in the trade, capitalized on a reasonable basis and with its production concentrated at its Hartford and Westfield plants.

The terms of the reorganization provide for a reduction of the capitalization from $22,500,000 to $6,500,000, and the issuing of $800,000 worth of 6 per cent, mortgage notes, payable in three lots in one, two and three years, respectively, together with the creation of an entirely new company, to take over the properties and assets of the old company. The new company is to have $4,000,000 in common stock and $2,500,000 in preferred stock, and it is estimated that by operating only the Hartford and Westfield plants the earnings should be not less than $400,000 per annum. Holders of the outstanding preferred stock in the old company, amounting to $2,391,000, are to receive 75 per cent. of the par value of the old stock in new preferred stock and 83 per cent of the par value of the old stock in new common stock. To effect this will require the exchange of $1,793,250 of the new preferred stock and $1,984,530 of the new common stock. Holders of the second preferred stock in the old company get 20 per-

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cent. of the value of the old second preferred stock in new common stock. To redeem the $8,625,100 worth of this old second preferred that is outstanding, will require $1,725,020 of the new common stock. The common stock in the old company will have no participating value in the new.

The owners of first and second preferred stock in the old company are to deposit their stock with the reorganization committee, which will buy in the old company's assets and properties after the receivers have paid off all the outstanding indebtedness, when the new company will be formed and the new stock issued. For its services in financing the transaction and in agreeing to buy up the $800,000 worth of 6 per cent. mortgage notes which the new company is to issue, the underwriters are to take $500,000 worth of the preferred stock in the new company, and $90,450 in new common stock.

The distribution of the securities of the new company upon its starting business would therefore be as follows:

	Preferred Stock.	Common Stock.
Syndicate for $800,000 cash	$500,000	$90,450
First preferred stock	1,793,250	1,984,530
Second preferred stock	.....	1,725,020
Balance in treasury	206,750	200,000
Total	$2,500,000	$4,000,000

For the $800,000 in cash supplied by the syndicate there is the corresponding issue of $800,000 in notes, which must be added to the preferred and common stock to obtain the total of security liabilities.

The preferred stock will be entitled to cumulative dividends at 6 per cent. from August 1, 1908, and no dividends on the common stock will be made until all back dividends on the preferred are paid up. Similarly no dividends on any of the stock will be paid until all the notes taken by the underwriters are paid.

Atlas Adding New Buildings.

The Atlas Motor Car Co., of Springfield, Mass., has just given out the contract for the building of a three-story addition to its plant on Birnie avenue. The structure, which will be a combination of wood and brick, will be ready by the first of October, and is expected to make possible a production of 600 cars a year, including taxicabs which the company is now building in addition to commercial trucks.

Stevens a Manager for Midland.

Charles L. Stevens, formerly with the Hartford Suspension Co., and latterly located in Denver, returns to New York after two years, as the Eastern sales manager of the Midland Motor Car Co., of Moline, Ill. His headquarters are at the Allenhurst Garage, the New York home of the Midland.

Gibb's Tire Gets Paternal Backing.

Another new tire, having a combination of rubber and springs, is to be manufactured in Little Rock, Ark. The inventor is Fred Newton Gibb, whose father, Frank W. Gibb, an architect, has formed a company for its manufacture after having tried a set out on his car. The sheriff, several physicians and other citizenry are interested.

Hartford to Have Outdoor Show.

A pretentious outdoor automobile show is to be held at Hartford, Conn., in connection with the Connecticut fair and grand circuit races at Charter Oak Park, September 7 to 12. It is to be known as the Connecticut State Fair Association automobile show, but will be under the management of Fred W. Dart and E. G. Biddle, of the Hartford Automobile Dealers' Association. The exhibition will be given in a huge tent, with spaces for car exhibits and accessories. Electric lights and band music will help make it interesting until 10 o'clock at night.

Bennett Broadens His Territory.

The New York branch of The White company will hereafter be known as the Eastern Branch, and George W. Bennett will take the title of Eastern sales manager. The territory to be handled by the Eastern Branch comprises New York State as far as Rochester, the eastern counties of Connecticut, part of Berkshire county, Mass.; the entire States of New Jersey and Delaware, and the eastern half of Pennsylvania. The office of The White Co. in Philadelphia becomes a sub-branch under the control of Manager Bennett.

Elgin Takes Hold of Hilger's Tire.

The Elgin Automobile and Spring Tire Co. has been formed in Elgin, Ill., to make Bernhard Hilger's spring tire for motor vehicles. Capital from Elgin and from South Bend, Ind., is interested. Hilger has turned in his stock in an old company that was organized to manufacture the tire, and has taken 51 per cent. of the stock of the new enterprise. The following officers have been chosen: C. O. Lightner, president; George R. Thompson, vice-president; J. C. Kraton, secretary; and J. D. Gaylord, treasurer.

Springfield Springs a Spring Tire.

A modest 14 per cent. is being promised investors in the preferred stock of the Flexible Tire Co., of Springfield. The $100 shares are being offered in the local papers for $50 a share, and prospective purchasers are invited to take a free ride on its spring and rubber tires to assure themselves as to the merits of the invention.

Oldham Perfects a Farm Truck.

Experience among the great wheat fields and farms of Iowa has moved W. F. Oldham, the retiring president of the Auto Thresher and Implement Co., to design a motor farm truck which in addition to being able to transport farming machinery from one point to another, is also capable of supplying power to threshers, separators, corn shellers, huskers, and the like. The power plant is a four cylinder motor. Among other special features, the truck is equipped with traction wheels for country roads and "sheath" tires—not skirts—for city pavements. A company is being formed in Sioux City, Ia., to manufacture and market the truck.

Shelby Starts a New Tube Mill.

Following the destruction of the Shelby steel tube mills at Shelby, O., some six weeks ago, the new Shelby Tube Co. has been perfected by the election of the following officers and directors: President, J. C. Fish; vice-president, C. M. Skiles; second vice-president, C. S. Hook; general manager, A. C. Morse; secretary, Howard Seltzer; treasurer, James Brubaker; directors, J. C. Fish, Charles Hook, G. M. Skiles, A. C. Morse, J. A. Seltzer, Roger Heath, Edwin Mansfield, H. W. Hilderbrandt, T. J. Green, Jonas Feigher, Y. O. Peters, Robert Greer, J. W. Williams, R. P. Bricker and C. S. Moore. The total amount of capital subscribed is $250,000. The company is incorporated for $500,000.

Flexible Wheels Their Hope.

Easthampton, Mass., is looking forward to the establishment of a great manufacturing enterprise in its borders hinging around a new flexible wheel for automobiles in which a number of Springfield men are interested. The Barnett machine shop and the old Brown wagon factory are to be used for making the new wheel, according to the plans that have been announced. The company will be formally organized in Easthampton on August 28th.

Triumph Tire to be Made in Wheeling.

With an authorized capital of $1,000,000 and a paid in capital of $200, the Triumph Automobile Tire Co. is shortly to start up in Wheeling, W. Va., at a factory which has been obtained at No. 40 Zane street. The incorporators include C. K. O'Hara, of Akron, O.; Henry E. Keyes, Charles O'Deer, W. E. Johnson, of Homestead, Pa.; and K. P. Stewart, of Wheeling.

Reliance Yields to Owosso's Offers.

The Reliance Motor Co. is packing up preparatory to its removal from Detroit to Owosso, Mich. The latter town was in competition with Adrian and Lansing, Mich., in trying to get the Reliance company, but Owosso's offers finally proved the most alluring, including as they did, the purchase of some $200,000 worth of stock.

Burdick Bringing Out a New Car.

Under the name of the Burdick Motor Car Co., a new concern has been started in Eau Claire, Wis., by Ralph M. Burdick, formerly identified with the American Motor Co.. The first machine to be turned out will be a six-cylinder car of 75 horsepower, to sell at $5,000, and to carry seven passengers.

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COURT HOLDS UP POPE DIVIDEND

Dispute as to Money for Unzicker Claims—Appeal of Disallowed Claims—Patent Licenses Permitted.

Vice-Chancellor Howell has reserved decision on an application by Sherrerd Depue, as counsel for the Pope Mfg. Co. receiver, to pay a second dividend of 25 per cent. to creditors whose claims have been approved. There was no opposition to the payment of a second dividend, but the proposed setting aside of an equal proportionate share to await the determination of what is known as the Unziker claim, which amounts to $262,000, was opposed by Mr. Depue, and on that account, the main question was held in abeyance. When the first 25 per cent. dividend was authorized the sum of $65,000 was ordered paid into court to be held pending a settlement of the Unziker claim, which had been disallowed, both by the New Jersey and the Connecticut receivers.

Gilbert Collins, of Jersey City, asked that this be done again, saying that funds had been transferred from the Connecticut jurisdiction to that jurisdiction expressly for that purpose.

It was disclosed that the receivers have available for the payment of a second dividend o total of $454,000, that sum being made up of a balance of $241,000, after the payment of the first dividend, $130,000 from the sale of Columbia Steel Co. stocks, and $300,000 received by transfer from the Connecticut jurisdiction. The payment of a 25 per cent. dividend will take up $380,000 while the setting aside of the same proportionate share for the Unziker claim will require $65,000 more, making a total of $445,000, thus leaving a balance of $9,000 in the hands of the receivers.

Mr. Depue argued that there was no necessity of tying up a further sum of $65,000, inasmuch as there was no question but that there would be sufficient assets available for the payment of the Unziker claim in the event of its being allowed. The Hartford plant, Mr. Depue said, was alone worth $1,500,000, to say nothing of the Hagerstown (Md.) and Westfield (Mass.) plants, while the remaining claims, after the payment of the proposed dividend, would aggregate only about $800,000.

Vice-Chancellor Howell signed an order limiting to 30 days the time in which claimants, whose claims have been disallowed by the receivers, may appeal. The claimants named in the order are: Beech & Sweet, Curtin Williams Auto Co., C. H. Childs & Co., Dodge Motor Vehicle Co., Fickling & Co., Quaker City Auto Co., Louisa A. Unziker and others, and B. F. Goodrich Co.

Another order, signed by the vice-chancellor, authorizes the receivers to execute a license agreement with the Associated Patents Co. relative to royalties for the use of clutches and brakes controlled by the National Brake and Clutch Co.

Apperson Prices are Changed.

Price changes are announced in the Apperson line of six models for the coming season. Sales Manager George H. Strout, of the Apperson Bros. Automobile Co., Kokomo, Ind., is at present on a business trip, and has already closed with old agents in three cities, including New York and Philadelphia, for greater quantities than ever before. After visiting Boston, Albany, Cleveland and other points, he will go to Colorado, "for a two-weeks loaf," and about the first of September wil start for a four weeks' trip on the Pacific coast.

The prices that he is announcing for the 1909 cars are as follows: Model O, a new car, 30 horsepower, equipped with double ignition, magneto and storage battery, and with a 3, 4 or 5-passenger body, optional, $2,450; model M, 35-40 horsepower, with 3 or 4-passenger body, optional, $3,000, and with a 5-passenger touring car body $3.350; Model I, 40-45 horsepower, 7-passenger body, $4,200; model K, 50-55 horsepower, 7-passenger body, $4,700; Jack Rabbit model, 2-passenger speed car, $5.000; and model S, 50-55 horsepower, 6-cylinder, 7 passengers, $5,500.

The model M, a recently developed shaft drive car, has proved to be quite the success that was expected, and this model, together with all the others except model O, is ready for immediate delivery. The model O will be ready about the middle of August. The new catalogue of the cars, showing all the models, will be issued early in September.

Franklin Tells Salesmen Its Plans.

Announcement that the H. H. Franklin Mfg. Co. intends making a special feature of taxicabs and commercial vehicles for the coming season was made at the third annual gathering of Franklin salesmen at the factory in Syracuse, which came to a close this week. The 1908 models were shown, and their good points explained by Designer John Wilkinson and Superintendent F. J. Haynes. A run to Glen Haven in the Franklin cars that competed in the Glidden tour was part of the social program, and the proceedings were presided over by President H. H. Franklin, G. H. Stilwell, and Designer Wilkinson.

To Choose Standard Quick Acting Rim.

Significant as the first official getting together of the Association of Licensed Automobile Manufacturers and the American Motor Car Manufacturers Association, a conference between representatives of both associations was held at No. 7 East Forty-second street, New York, on Monday of this week, looking to the adoption by their members, respectively, of a standard quick acting, quick detachable, demountable, or universal rim, which will be satisfactory to car and tire makers alike.

PREPARING FOR A BIG CAMPAIGN

Detroit's "All-Star" Combination Announces Its New Car—Acquires Northern Plants and License.

The opening gun of the selling campaign of the Everitt-Metzger-Flanders Co., of Detroit, has been fired in the issuance of a broadside of information concerning the car which the much hyphenated concern is putting out and a statement of the company's organization and resources, all of such a nature as to give assurance of the large place which it is bound to occupy in the field in the very near future.

By the acquisition of the two plants of the Northern Motor Car Co. in addition to the Wayne plant, the manufacturing facilities of the company have been expanded to a point where the expected 12,000 car production for the coming year is in the range of easy accomplishment. The Northern factory at Port Huron, Mich., is to be used chiefly for the making of parts and axles, while the cars in their final form will emerge from the former Wayne plant.

Agency arrangements for the new $1,200 four cylinder, five-passenger car, which is styled the E-M-F "30," are in the hands of William E. Metzger, the secretary and sales manager. As sales manager of the Cadillac Motor Car Co. from its start, Metzger has had an experience which very few men in the trade can begin to equal, and he is widely known throughout the length and breadth of the country.

The production end is correspondingly strong, being in charge of General Manager Walter E. Flanders, who is credited with a great share of the marvels wrought in production system at the Ford Motor Co., which concern he left a few months ago to join the new enterprise. Backing Flanders are Factory Manager Thomas Walburn and General Superintendent Max Wallering, while Chief Engineer William E. Kelly has been in the automobile business as a designer from its infancy.

The heavy duties of the general business management of the company devolve on Byron F. Everitt, the president, who as the organizer and moving spirit was responsible for the selection of an "all-star" caste. Supporting Everitt in the matter of financial resources are J. B. Book, Charles L. Palms, William T. Barbour, and Charles D. Bennett, these men with Everitt, Metzger and Flanders, forming the board of directors. The advertising and publicity is in the hands of E. Le Roy Pelletier, whose connection with the Ford Co. in the same capacity, established recognition of his ability.

The Selden license rights of the Northern Motor Car Co. will make the company a "licensed" concern, so that the cars will be available to "licensed" agents.

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FRANKLIN Automobiles

Franklin air-cooling proves up on the road. See what it did in the Glidden tour.

With all the climbing and hard pulling and low-gear work no Franklin ever had to stop to cool off. Nearly every water-cooled automobile had to. Some had to put in water every 20 miles. The Franklin towed bigger cars up one steep hill. The *Horseless Age* said the Franklin made better average time than some competitors with twice the horsepower. The only penalty against any Franklin was for broken springs. Our springs were not wound as others were; and two Franklins came through with perfect scores. The water-coolers declared they didn't believe the Franklin could do it.

No one who knows the facts ever asks honestly if Franklin air-cooling cools, and it makes the whole automobile simpler and stronger, more powerful in proportion to its weight, and more economical than is possible with a water-cooled motor.

The Franklin Model H Touring-car with its 42 horsepower and six cylinders weighs under 2,500 pounds. The majority of six-cylinder automobiles weigh from 3,500 to 4,000 pounds. Type H will average 14 miles on a gallon of gasoline, carrying seven passengers. And it will go 55 miles an hour if you want it to. Not catalogue speed; real speed.

Type H is the easiest riding and smoothest-working automobile in the world. You can't hear nor feel the engine. It is as handy and easy to manage as any little runabout. And there isn't a more durable automobile in existence.

The Franklin Type D five-passenger automobile weighs under 2,200 pounds. Other five-passenger automobiles average a third heavier. The Type G family touring-car weighs 1,600 pounds.

You have no plumbing system to lug nor bother with in a Franklin; no water to leak nor boil, nor freeze in winter. You can use a Franklin any minute in the year.

The Franklin concentric valve and dome-head cylinder get 25 per cent. more power out of the fuel. The Franklin auxiliary exhaust discharges 60 per cent. of the dead combustion-heat immediately after the explosion, without carrying it back through the cylinder.

These are the two most important inventions in automobile engineering. No automobile but a Franklin has anything like these features, nor any means of getting their results.

Franklins have always been air-cooled—for seven years. And 6,000 air-cooled Franklins are now in daily use.

An automoblie is as good as it does. Put any Franklin to this test.

16 h. p. 4-cylinder Runabout $1,750	28 h. p. 4-cylinder Touring-car or Runabout...$2,850
16 h. p. 4-cylinder Touring-car.... 1,850	42 h. p. 6-cylinder Touring-car or Runabout... 4,000

Prices f. o. b. Syracuse.

Write for 1909 Catalogue.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 648.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JULY 30, 1908.

Unsatisfactory End of Glidden Tour.

It was a long, hard trip for the sake of a squabble at the end.

Whether there is any longer a good reason for running the Glidden tour until all perfect scores but one are marred or broken is still in doubt. The results this year almost make the judicious yearn for a tour in which every one might finish with a perfect score and barrels of honor.

Just as the affair draws to a close, an observer with more fidelity to the rules than to ethics of the occasion, quietly marks his little report card, adding some three minutes to his car's schedule without the driver knowing that he has done so. Oppressed with a sense of his official responsibilities he keeps his lips tight as the driver checks in on the regular schedule, which according to the observer's calculations is three minutes too soon. The result points to the fact that there is great luck in getting an observer who can be strict and impartial and yet exercise common sense and justice.

A protest was filed, urging that a penalty should be imposed against the car in accordance with the rules. A natural action, indeed, but how idle to appeal to the rules as rigid guides. There was but one rule in the lot that could be regarded as fixed and certain. Again let us dwell on it as a masterpiece of autocracy and latitude in sport:

"The Chairman of the Touring Board reserves the right to alter or amend, suspend, or repeal these rules from time to time, up to and including the end of the tour and final award, as may in his judgment be deemed expedient."

If the cause of justice was served in suspending the action of the other rules so far as the technical penalty of an otherwise perfect score team is concerned, so much the better, but a "beneficent despotism" which makes a contest like the Glidden tour simply a "blind run" with one man the Only Rule in the ultimate, should never be permitted to exist again.

Advantages of the Two-Cycle Motor.

It never ceases to be a source of wonder to one not a gas engine designer by profession that the introduction of the two-cycle type of motor has not been more extensive among automobile constructors. Its freedom from mechanical complication, the simplicity as well as the small number of its moving parts, its relatively low cost of construction are sterling recommendations which should weigh very heavily in its favor when the specifications of a new model are under consideration. With the alluring possibilities of multiple production, the problem of repairing the two-cycle motor becomes merely one of the substitution of parts—an operation which, save in the case of crank shaft bearings, requires practically no hard work or other fitting. Its low cost of upkeep therefore, should appeal very strongly to the purchaser.

Over against its advantages may be mentioned its reputed unreliability, due principally to the erratic performance of certain very small motors which have been carelessly produced for motor boat propulsion; its unresponsiveness to throttle control, and its relatively low fuel economy. Of the erroneous impression which a few unhappy experiments have caused to be applied in many instances to the entire class, it need only be mentioned that for every unsuccessful motor of this type there are many which are sufficiently sucessful to go thumping on, day after day, in the service of fishermen and other users of small utility craft under conditions which probably are much worse than those met with in automobile service. As a matter of fact, experience with the few makes of automobile motor in which the two-stroke cycle is employed, has fully justified its use. The apparent instability of the average motor of this class under conditions of varying load and throttle opening, is one which may be largely overcome by good design and a better understanding of the problem of carburation than has been current hitherto. As for fuel economy, its importance must be considered insignificant, except in motors of more than moderate power. For the purposes of the ordinary touring car, it is not of noteworthy magnitude.

In the paper on two-cycle design, printed elsewhere in this issue, the student of the gas engine may find considerable valuable data. The method of distributing the gases in the two and four stroke types is so radically different that it is small wonder the pioneers in this field should have had their full share of trouble in perfecting a motor having the desired flexibility. The chief difficulty arises in the proper proportioning and positioning of the ports. The slightest deviation from the proper location or the smallest fraction of a square inch variation in area from the standard may be responsible for tremendous differences in the operation of two motors built after the same designs and apparently duplicates in every respect. The general principles to be followed in laying out a motor of this class are clearly defined in this connection, and in unmistakable terms, free from the confusing methematics which usually enshrouds pure theory. For it is to be remembered that the facts set down result from the conclusions of actual practice rather than of untried ideas.

The fascination of the two-stroke motor —its simplicity—tends to the conclusion that it must be as simple to design and build as it is to assemble and operate. Herein lies a considerable error, and a probable explanation of the discouraging results which have been obtained by constructors who have not been eminently successful in this field. The fact is the two-stroke cycle motor is difficult to build with any degree of success, unless precautions are taken to have all parts made to closest gauge, and of the right materials. On this account the

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type is not to be regarded as cheap to build from the standpoint of first cost. Once the design is carried through properly, however, and the arrangements for accurate production on a large scale perfected, it would seem that the investment should prove an extraordinarily profitable one.

The Value of Motor Parkways.

With the completion of the first section of the Long Island Motor Parkway, the old enthusiasm at the notion of having a highway exclusively of and for motoring interests, struggles bravely to the fore again. The delights of possession which mere membership in the fraternity afford in this connection tend to crowd out soberer reflection as to the immensity of the undertaking, and the number of obstacles which must be overcome in bringing it to pass. The probable success of this, America's first motor highway, also is likely to stimulate the rehabilitation of several other schemes of a like nature which at one time or another have obtained a measure of public notice.

At the same time, it is well not to overestimate the probable value of such courses nor to speculate too freely on the possibility of a general extension of their use. For the purposes of international and national competitions, of experimental tests of various sorts, and of pleasure runs, such facilities are of very great importance, especially when brought within convenient reach of a great city. The exclusive motor highway is useful to this extent: that it removes from the common public roads such competitive events as might cause inconvenience and danger to the ordinary users of those thoroughfares; that it ensures the maintenance of a proper road surface, free from the desructive effects of the hoofs of animals; and that in the absence of uniformly good roads, it provides a limited area of nearly perfect footing for the machine. The common highway must still retain its own peculiar function in the community, however, and it is extremely doubtful whether any chain of special roads adapted to interurban travel on the horseless plan ever will be realized. In catering to the needs of a somewhat limited class it would even appear that the realization of this vision would be counter to the best interests of commercial prosperity. It would mean a cessation of the interest of the motoring contingent in the good roads movement, so far as affected by such enterprises.

England's great motordrome at Brooklands, though built as a race track rather than a parkway, is based upon the same idea as has been the moving course in the Long Island instance. The proposed courses in Germany and France, the latter of which just now is being freely agitated, also have a similar purpose. Probably the not distant future will see several other undertakings of the same nature, all on a large scale, and formed with the purpose of providing motorists with a suitable opportunity for the unrestricted pursuit of the pastime of fast driving. As commercial ventures, it is likely that they will repay the investor more or less in proportion to their proximity to great cities. Certainly, the appreciating realty values of such locations is destined to form a welcome security for the money sunk in them. The idea that such undertakings ever will be expanded into an independent highway system, however, is not a wholesome one to cherish.

Dealing with a Needless Offense.

It is to be observed that tardiness in coming into an appreciation of the common welfare of others, invariably results unpleasantly for the offender of the public In the case of the heedless motorist, oppressive legislation has more than once been threatened, and occasionally brought into effect. The flagrant abuse of the speeding capabilities of the automobile, however, is by no means the only disagreeable result of placing the machine in the hands of reckless and thoughtless persons. That the Park Commission of New York City is perfectly justified in ruling out of its precincts all motor cars which give forth offensive vapors is not to be denied. Such a measure, applied to the whole city has been threatened already, and avoided, largely, it is to be supposed, through the indolence or indifference of the aldermen. That it may follow this, however, unless owners and drivers are brought to a realization of the seriousness of the smoke nuisance, is a natural conclusion. That the companies operating vehicles for hire are alleged to be the worst offenders in this respect, should tend to quell the resentment of the private owner against what he otherwise might regard as an added invasion of his liberty. The smoke nuisance is a needless offense. Its suppression may be brought about either through a popular appreciation of this fact among users, or by more irksome means. It is to be hoped that this latest park ruling may serve as a timely warning and forestall the passage of more generally restrictive measures.

It would be interesting to follow out the reasoning which construes the act of warning people against possible arrest for violation of law as one calling for suppression by the police. Some "Good Samaritan," it appears, has been distributing cards at the St. George terminus of the Staten Island ferry warning automobilists to watch out for plain clothes men of the police force into whose hands they might fall through "letting her out" on the island streets and roads. When the fact became known the police were ordered to look after him. It does look as if the man who does anything to assist in obtaining respect for the laws is doing in his own way, and not in an illegal way either, exactly what the police are employed and paid for doing. To prevent law breaking is as desirable and as commendable as to make arrests and secure conviction when the law is broken. In England, where the question already has been thrashed out pretty thoroughly in establishing the status of the "scouts" regularly maintained for a similar purpose by one or another of the motoring organizations, it is interesting to observe that this view has been recognized by courts of law

COMING EVENTS

August 1, New London, Conn.—Hill climbing contest on Town hill.

August 1, Wildwood, N. J.—Motor Club of Wildwood's annual mid-summer race meet on Central avenue boulevard.

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

September 7, Lowell, Mass.—Lowell Automobile Club's 200 miles road race, on Merrimac Valley boulevard.

September 7, Columbus, Ohio—Columbus Motor Club's 24 hours endurance race at Columbus driving park track.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

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PROGRESS ON MOTOR PARKWAY

Five-Mile Stretch of the Road Completed —Will Constitute Part of Course for Vanderbilt Cup Race.

While the Long Island Motor Parkway project has been kept very quiet since the day of the opening celebration last June—on which occasion General Manager A. R. Pardington, in the absence of President William K. Vanderbilt, Jr., turned the first spadeful of earth—the work of road building has been progressing rapidly and under favorable conditions.

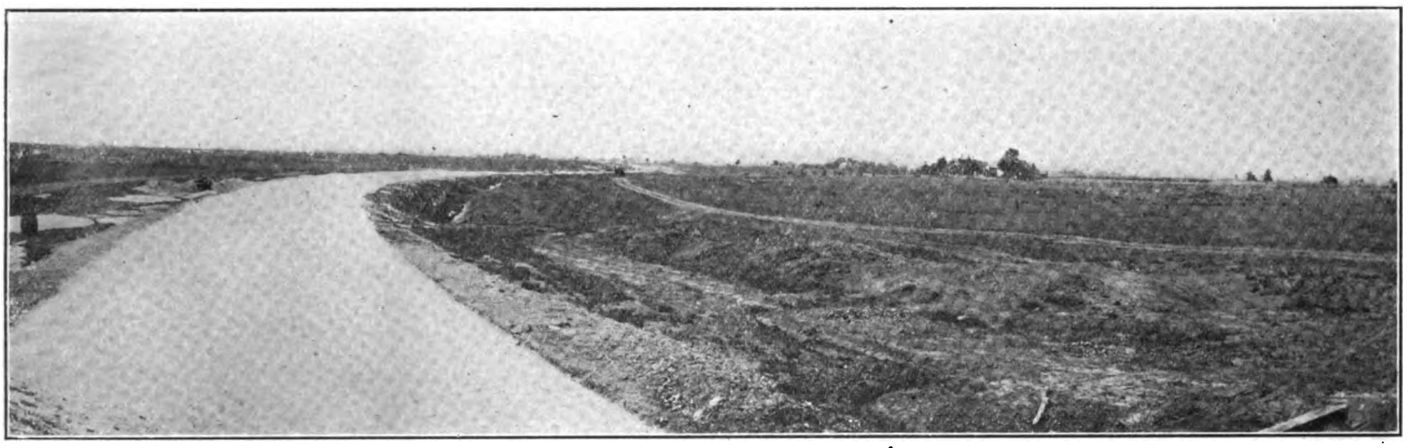
An enormous amount of work was encountered by the promoters of the enterprise, who found that before the actual road building could be commenced there was a mass of executive detail which must needs be taken care of.

A portion of the first section of the road has been completed—a stretch about five miles long, located south of the town of Hicksville. The completed portion is approximately one-half of the section, which in its entirety consists of that part of the Parkway running from a point directly north of Farmingdale to about one mile east of Garden City. It is this section of the road which has been included in the course selected for the Vanderbilt cup race of 1908; and as its length is about 11 miles it contributes slightly more than one-third of the entire cup course. While but a portion of the section is finished at this time, so much has been accomplished on the unfinished part that there is not the least question but that the terms of the contract, which call for the entire section to be finished by October 1st, will be fulfilled.

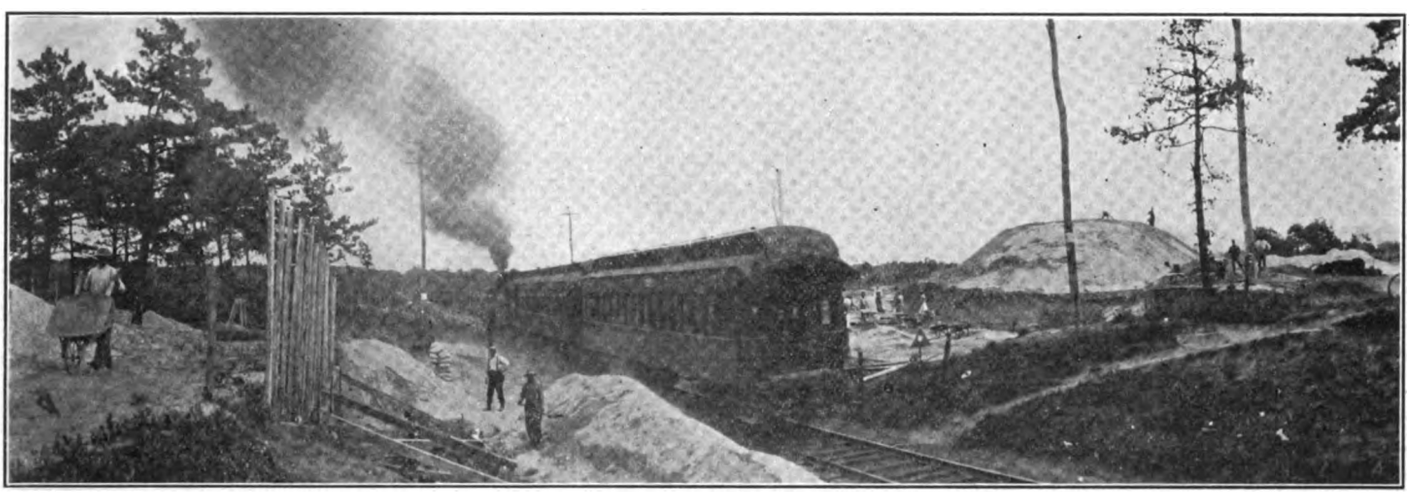
The accompanying illustrations show the completed roadway and give an idea of the immensity of the undertaking. Not only was it necessary to build a road through virgin country, but the construction of it, for its intended purpose, presented problems which had not previously been encountered, as no similar project had been attempted. Roughly speaking, the plan of the construction of the parkway is the same as is followed in railroad building; that is to say, sharp curves have been eliminated, grades, so far as it was possible, have been levelled, and when levelling could not be accomplished, slopes of a long, gradual degree have been arranged in preference to short, but severe hills. Of prime importance to motorists was the decision that the parkway should be free of grade crossings.

Obviously this constructive plan necessitated many "cuts" and "fills" and the material for the latter largely was supplied by the material taken from the former. To avoid grade crossings it was necessary to build bridges above the tracks. On either side of the railroad right of way cement foundations were erected to support these viaducts, the approaches to which were made gradual by filling in the land for a considerable distance. That these "fills" are considerable is demonstrated by the illustration which shows the distance between the railroad track and the knoll on the right. The intervening space will be filled in solidly, the roadway made on top of the "fill" which will be of a height sufficient to carry it a few feet above the top of a train.

With the opening of the first section comes renewed interest in the enterprise and with the opening is dispelled all doubts as to the future of the parkway.



VIEW SHOWING THE CHARACTER OF THE LONG ISLAND MOTOR PARKWAY



WHERE THE PARKWAY WILL BRIDGE THE RAILWAY

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VANDERBILT CUP RACE PLANS

October 24th the Probable Date, but not officially Announced — Elimination Contest Carded for October 10th.

Doubtless there will be a race for the Vanderbilt cup this year, and what is more to the point, it will likely take place on Long Island on the morning of October 24, although no official announcement to that effect has been made. It has been announced that the elimination race to decide the American team will occur on the morning of October 10th.

The news of the date of the Vanderbilt cup race came out this week only through the fact that A. R. Pardington, vice-president and general manager of the Long Island Motor Parkway, Inc., had applied to the Board of Supervisors of Nassau county for permission to use the roads of that county for the elimination race on October 10th, between the hours of 5 a. m. and 10 a. m., and for the race proper on October 24th, between the hours of 5 a. m. and 3 p. m. A public hearing will be given on the petition August 3d, at 10 a. m.

As no official announcement has yet been made by the American Automobile Association the Motor World sought to verify the news of the application for permission to close the roads on that date. When seen in his office Secretary Elliott would neither affirm nor deny the facts. That an official statement will be made by the American Automobile Association next week was all he would commit himself to say.

Later a statement was sent out through the publicity department of the association to the effect that another car has been formally entered in the Vanderbile cup race, making the third entry that has been received by the cup commission. The date of the elimination race was announced as October 10th.

The latest candidate for the American team is a special Chalmers-Detroit, 50 horsepower stock car, the entry being made by J. S. Harrington, of Worcester, through the Worcester Automobile Club. Oliver Light is named as the driver.

The other entrants who have deposited fees are Robert Graves, who enters a Mercedes in the race proper, and W. W. Burke, who has entered a Mora for the elimination. The Mercedes car will be driven by Lautenschlager, who won the Grand Prix recently. The driver of the Mora car has not been named.

The course for this year's Vanderbilt cup race, according to the application of Vice-President Pardington, will embrace the following circuit: Beginning at the Round Swamp road at or near the juncture with a road known as the Manetto Hill road to Plainview, thence on a straight road to Woodbury, and east along the Woodbury road to a point or juncture of the Woodbury road with the Jericho turnpike, over the Jericho turnpike west to Jericho village, thence south from Jericho village on the Massepequa-Oyster Bay road to its point of juncture with the Jericho turnpike, thence west over the Jericho turnpike to the old Westbury road, thence south to the Old Country road and easterly along the Old Country road to Merrick or Whale Neck avenue, thence along Merrick avenue to a point about 400 feet north of the Central Branch of the Long Island Railroad to the roadway of the Long Island Motor parkway. About ten miles of the parkway is to be used and the official grandstand will be located on this stretch.

Sioux City Sees Good Racing.

Barney Oldfield and Charles Soules were the attraction at the meet held by the Sioux City (Ia.) Automobile Club at that city on July 18th, but although the track was in good shape no records were at any time in danger. Soules is now Oldfield's racing partner and the pair were able to make a good race in their three miles match. Soules got the pole at the start and maintained a lead of a length until the mile where Oldfield gradually closed up the gap and won out in a grandstand finish by a half length.

In their mile record trials Oldfield covered the lap in 1:04⅕, and Soules was timed in 1:07⅖. James Graves, an 18-year-old lad, hailing from Wayne, Neb., won more plaudits than did the professionals. He won the 25 miles for fully equipped touring cars, the three-miles free-for-all and the novelty. The two runabout events went to Walter Gnehm and Eugene Gnehm.

Wildwood's Midsummer Racing Program

Saturday next, August 1st, will be the date of the annual midsummer race meet conducted by the Motor Club of Wildwood, on the level Central avenue boulevard, that city. Ten events have been carded, as follows: Gasolene cars selling under $1,250, six cylinder cars, free-for-all, gasolene cars between $3,001 and $4,000, four cylinder gasolene cars over $4,000; free-for-all kilometre time trials; steam cars only; mile time trials, free-for-all; stock touring cars carrying four passengers.

New London Cards a Hill Climb.

New London, Conn., intends to place itself on the automobile map by holding a hill climbing contest in that city on Saturday afternoon next, August 1st. The events will be held on Town hill. Five events are on the card, as follows, according to price classification: Under $1,000, under $2,000, under $3,000, under $4,000, and a free-for all.

The Selma Automobile Club has been organized in Selma, Ala., with the following officers: President, Huston Armstrong; vice-president, G. S. Armstrong; secretary, James Kenan; treasurer, H. A. Denton.

GERMANY CLAIMS THE "RACE"

Protos Car, First to Arrive at Paris, Protests Its Handicap—The Thomas Delayed on Final Stage.

The railway-steamship-and-otherwise aided German Protos car, having arrived in Paris ahead of the other competitors in the New York to Paris "race," the Zeitung am Mittag, the Berlin newspaper which backed that car, has promptly claimed the race as being won, protesting against the allowance of 30 days to the American Thomas car as "an impossible sporting procedure." The German car arrived at the French capital at 6:15 p. m., Sunday, 26th inst. Thus it wins the trophy offered by Grand Duke Vladimir, of Russia, to the car first completing the big journey. Lieutenant Koeppen, the driver of the car, was lionized upon his arrival, and none were more hearty in their congratulations than the American residents. The Protos car completed its trip on the 166th day after the start from New York. On that day the American car reached Koenigsburg, 1,051 miles from Paris, at 9.40 a. m. The Italian Zust car had not been reported since four days previous, when it was at Tomsk, Siberia, 5,340 miles from Paris. The Italian car has an allowance of 15 days against the Protos.

It is not expected that the Thomas car will arrive in Paris until this (Thursday) evening. The American car has been beset by ill fortune during the later period of its running, and Schuster and Miller were again the victims of disappointment yesterday when a coupling-shaft gave out 12 miles from Hanover, which city they left at 3 a. m., expecting to arrive at the French capital by evening. For 16 hours they worked under a wayside apple tree and it was 8 o'clock in the evening before they had completed the repair.

Even at the early hour when the Americans set out from Hanover, they were piloted out of that city by a car that had come all the way from Dortmund to show them the way. There were several ladies in the pilot car, and they appeared delighted by their experience. They set a stiff pace, and almost brought the Americans to grief. The fog still hung low, and a number of farm wagons were met on their way to market, with the drivers asleep in their seats, paying no attention to the course of their teams. It was only by good luck that several collisions were narrowly averted.

Desiring to have women automobilists take an interest in club life the Minneapolis Automobile Club has altered their constitution so that the fair sex may join. The $25 initiation fee will be waived when the applicant is a woman.

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GLIDDEN'S CUP IS RETURNED

Pierce Refuses It Because of Dispute—Clifton's Pierce Wins Hower Trophy—Gleanings of the Tour.

Somehow the Glidden tour did not end nicely at all. There was not the hilarity to its conclusion that has marked similar events in the past, and a row over whether one or three teams in close contest for the trophy should or should not be penalized brought the thing to an unsatisfactory conclusion. As matters stand now, the Glidden Trophy is in the hands of the touring board of the A. A. A., because the George N. Pierce Co. would not accept it under circumstances in which their right to it might be under the shadow of a doubt.

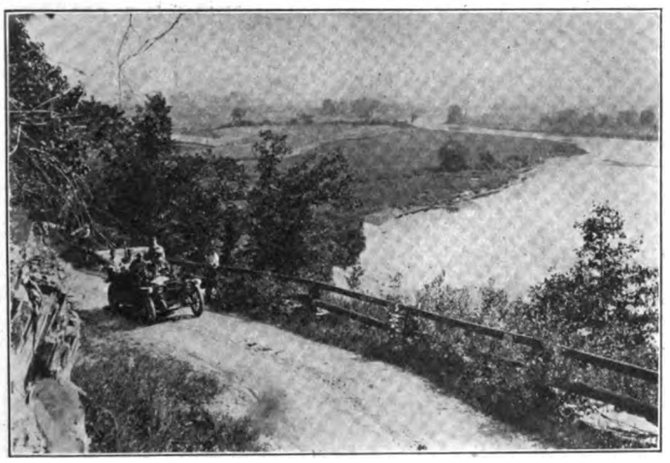
The competing cars arrived in Saratoga, N. Y., early on last Thursday afternoon, and it was thought that the Buffalo team, consisting of three Pierce Great Arrow cars, the Columbus team, consisting of three Peerless cars, and the Chicago team, composed of two Haynes cars and an Olds, were in a three-cornered tie for the trophy. However, the driver of the Olds in the Chicago team, Andrew Auble, had some days before announced his intention of quitting at Saratoga, whether his car was in the tie or not, so that it looked like a run-off between the Pierce and the Peerless teams.

Nevertheless, before evening it was discovered that the observer on J. W. Maguire's Pierce car, of the Buffalo team, had by his record card made the car appear guilty of having come in three minutes before it should. Allowing the two minutes leeway permitted by the rules, the car would thus be one minute off its proper schedule, which would impose a penalty of one point against the car and one-third of a point against the team to which it belonged. Despite the observer's report the car and team were given perfect scores.

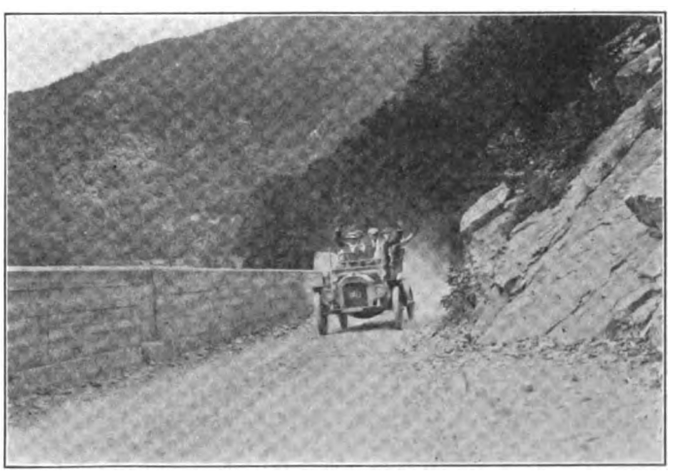
At the evening meeting of the contestants, Charles Burman, representing the Peerless team, filed a protest with Chairman Hower to the effect that in accordance with the observer's report and the published rules concerning penalizations for checking in ahead of time, the Pierce team should be penalized. The matter was gone into with detail and it transpired that the observer's action in adding three minutes to the running time of the Pierce was due to the fact that the car stopped for a brief halt on the way into Saratoga to take off the tire chains. Since the rules provided that all time spent working on tires, with the engine running and no other repairs being made, should be added to the running time allowed, the observer added the time spent in removing the chains, making a record to that effect on his card. Maguire, on the other hand, had not thought of it as being work on the tires themselves and it did not occur to him that the observer had made any additions to his running time. The observer vouchsafing no information or comment as Maguire drove confidently in on his regular schedule, the car arrived at the checking station three minutes before the time that the observer's calculations would have



SARATOGA'S WELCOME AT TERMINATION OF THE TOUR



ALONG THE WINDINGS OF WHITE RIVER, VERMONT



VIEW BETWEEN RANGELEY LAKES AND POLAND SPRINGS

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set as correct. When Maguire was called upon to sign the observer's record he protested that it was wrong, and that the time consumed in taking off the chains had not even been as much as three minutes.

The facts influenced giving the Pierce team a perfect score, and, when the Peerless protest was presented to Chairman Hower he turned it over to the "committee," composed of Buffalo men, for decision in secret conference. He did not wish to shoulder alone the responsibility for overruling the Peerless protest, and it was left to his "committee" to turn it down on the ground that the observer made a mistake.



JUST GETTING ACQUAINTED.

Feeling being rather high, the Peerless people declared that if the rules as set down were to be administered with so much leniency on certain occasions and to be enforced with rigidity in others, their cars would not compete in a run-off for the cup, and their withdrawal was announced. Henry May, vice-president of the George N. Pierce Co., being in Saratoga at the close of the run, and hearing of the disallowed protest of the Peerless team, directed the Great Arrow team to drive to the starting line the next day and then to refuse to cross the line if the Peerless team did not appear for the run-off.

The latter had not weakened in their position over night and did not show up, whereupon May wrote Chairman Hower, stating that inasmuch as no competitors had appeared for the run-off, he had ordered his team not to cross the starting line, as it was not the wish of the Pierce company to win the trophy on a fluke. This sportsmanlike action was the subject of very general approval and quite offset such doubts as had been cast on the Pierce honors because of the technical misunderstanding on time calculations. Its practical effect was to leave all three teams tied, according to the official records.

Whatever honors the Pierce cars may have relinquished in the Glidden contest were compensated for in the Hower competition. Five cars in the Hower class finished at Saratoga with perfect scores, including two Pierce Arrows, two Stoddard-Daytons and a Premier. It took four more days of road work to find the two Pierce cars left alone in the running. The run-off was from Saratoga to Syracuse, to Buffalo, to Cambridge Springs, to Pittsburg, all on a very fast schedule. The trip from Cambridge Springs to Pittsburg ditched the Premier, while the two Stoddard-Daytons were withdrawn at Pittsburg in the evening. Next day Clifton's Pierce, by consent, ran alone to Bedford Springs, thus winning the trophy.



OVERLAND, WITH PERFECT SCORE, HALTS TO HELP

Of the cars in the Glidden competition to finish at Saratoga with perfect individual scores, there were fourteen in addition to those on the three teams in the tie. These included the two Stevens-Duryeas, which were running for certificates only, and two Franklins, two Studebakers, and one each Premier, Thomas, Gaeth, Rainier, Oakland, Marmon, Garford and Reo, making in all a total of 23, of the 32 Glidden class cars, and 5 of the 14 Hower class, that made the whole 1,700 miles without a penalty.

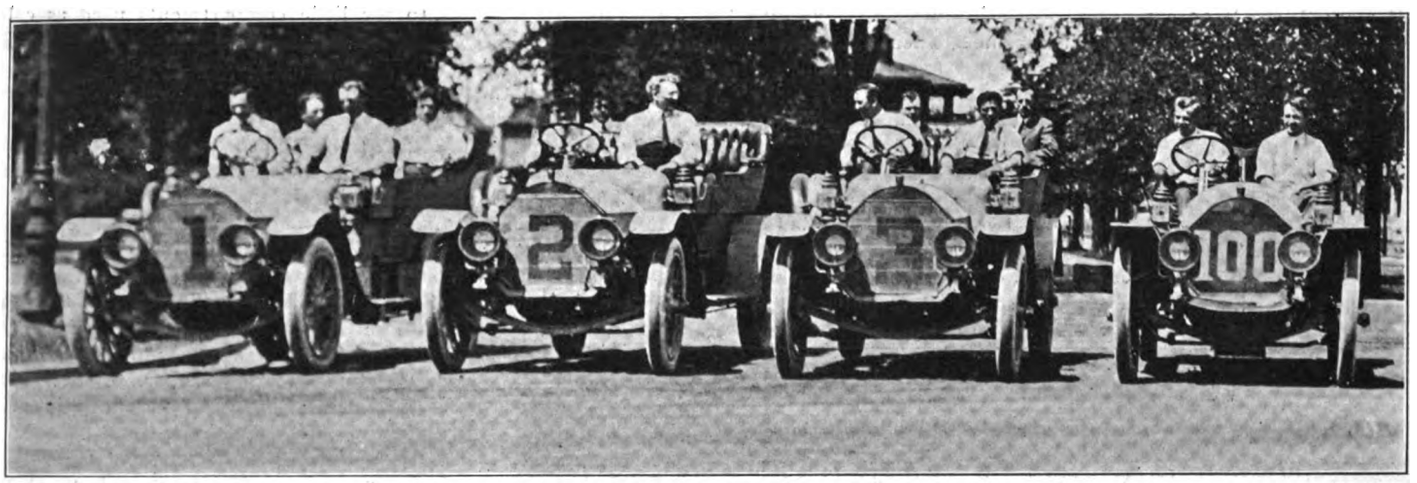
Gleanings from the Glidden Tour.

There are those persons who like motoring to such a fanatical degree that naught satisfies them until they can go off on a grand two weeks of more or less hardship—climb half a dozen ranges of picturesque though rough mountains, spend a lot of money, break a few bones, shake loose a few ribs which subsequently lodge in their livers, and likewise jar out all the fillings in their teeth, which are swallowed even as pills, while bumping over a long and progressive series of water-breakers. There are those persons who do such things because they are paid for it and would lose their positions if they declined, namely the drivers and mechanicians. Then there are those who go as war correspondents, partly for the joy there is in it and withal using their paper as an excuse and means of defraying expenses, in order that said paper may get the latest and best war news of the great tour, fresh from the front.

I was one of the latter—right there on the firing line with the other thirty-odd high tension news artists who wore dainty blue badges with pretty fobs labelled "Press." We were the busiest passengers on the tour, too, for we had to work at the end of the day and scrap to get our stuff over hot wires while the rest of the crowd sought readjustment of their systems in slumber. And let no one deem it a simple matter to separate fact and fancy and flash the "news" to a listless world, when your bones are bent with much jostling and your dusty eyes cry for sleep.

The Hower Tour set out from Buffalo, N. Y., on July 9th, to demonstrate that Hower's Pierce team could lick any other team—or so the early kickers had it—for was not Frank B. Hower riding right at

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PIERCE TEAM AND RUNABOUT WHICH MADE PERFECT SCORES

the head of the procession in a car of that make, closely followed by five other cars of the same make?

Clubs? That's so. The fifth annual reliability and endurance contest of the American Automobile Association, for the Glidden trophy was to have been a club affair. For the "club" part of the affair it was more or less a farce. There were three Pierce cars forming a team, running under the emblem of the Buffalo Automobile Club; there were three Peerless entries representing the hitherto unknown Columbus Automobile Club; there were three Marmons flying the Bay State A. C. streamers; three Studebakers said they were the Rochester A. C., and a trio of Garfords constituted Cleveland's representation. In other words, automobile clubs had about nothing to do with the whole affair, and the contest was wholly a manufacturers' tour. Fancy Mrs. Cuneo, she who is a class by herself, a resident of Richmond Hill, L. I., driving as one of the Chicago Club—a club in which she was never interested to any extent. Think of the honor for this club to have Mrs. Cuneo on its team. If the three A.'s annual contest is to be an out-and out manufacturers' event, why run teams under the guise of "clubs," borrowing the names of legitimately organized or other automobile organizations?



MRS. JOAN CUNEO, RAINIER.

The writer rode in that car known as the Moline roadster, driven by that prince, Neil Vandervoort. This was the only car in the run which did not burn gasolene. Instead, it burned "gaso-moline." The latter remarkable substance was used both as a fuel and lubricant, answering equally well for each purpose. Some said that it was also put into the grease cups, but this was not so. In this car, I had a highly adventuresome trip, notably on one occasion, when at Blairsville, Pa., a stuffed effigy of a man was suddenly hurled in front of the machine. The dummy struck the front of the car and hung on the springs. The crowd laughed and considered it a great joke. They asked for their baby back, but Vandervoort refused to give it up, fearing that they might repeat the trick and cause an accident. So we carried the dead man up into the mountains and threw it away.

Perhaps our most surprising adventure though, occurred up in Maine, during the latter part of the trip, at Mexico, 50 miles



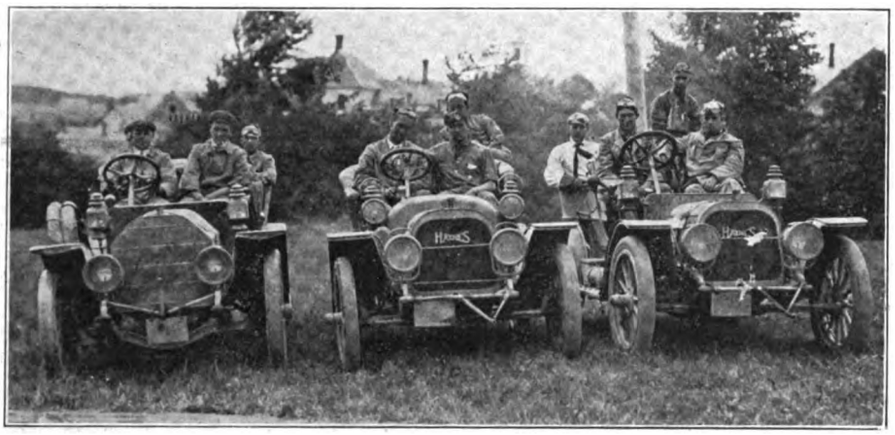
PERFECT SCORE STUDEBAKER, NO. 24



PERFECT SCORE GARFORD, NO. 30

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from Rangeley. A porcupine—a Mexican porcupine, of course, darted out from the pine woods with his quills standing on end and we ran over the cute little fellow. When we stopped, we found that his spicules had punctured a right front shoe and made it go flat. Think of that! Nevertheless, Neil Vandervoort made the gamiest run of the whole contest, making up two days' lost time between Harrisburg and Boston, and running from there on, under schedule. Meanwhile, his eye was in very bad condition, requiring Dr. Hoag's attention.



PERFECT SCORE CHICAGO TEAM—TWO HAYNES CARS AND AN OLDSMOBILE

The first thing on the Hower tour that really "got the tourists' goat, was that range of Allegheny mountains and their neighbors, the Blue Ridge, Scrub and Laurel. We crossed them last year on the tour and this season they seemed even worse than before. Those same old waterbreaks were there, more ghastly that ever—thousands of 'em, as we counted—and they made us feel like pulp long before the summits of those tough mountains were crossed. And yet, the cars stood the siege far better than last year and tire trouble was not nearly so plentiful. We tourists felt the effects of the bumping though, and the constant jouncing and vibration was no joke. Why, did not Mrs. Berwick, who rode with Mrs. Cuneo, pick some milkweeds at the foot of the Scrub Range mountains and were they not churned to buttercups by the time those hills were surmounted?

Of course the tour was not all hardship and bumps—not by a long sight. There was plenty of fun, fast and furious. Some of us who rode in non-contesting cars would stop at intervals and kid the girls along the route. At the different night stops we often found plenty else to amuse us. Harrisburg and Philadelphia tendered us smokers and when we reached Boston, the Bay State Club treated us royally. On Saturday we were given a clambake at Paragon Park, and we had great doings. When the banquet was over and the speeches by the mayor and others finished, we went out and paraded around lock-step for a while, wearing ten-cent "Merry Widow" hats. Then we started in to see the shows systematically. Half a hundred of the more foolish ones half killed themselves on the "human roulette wheel," which is nearly as bad as crossing the Allegheny mountains, or partook of that form of amusement known as "bumping the bumps, which vividly recalled the experiences of a few days before. Ultimately we adjourned to a "high class" vaudeville show. The seats of the front row, which were nailed down about eight feet from the stage (to allow some room for an orchestra, perhaps), were not close enough to the footlights to suit the eager tourists. Therefore we pulled up said rows of seats by the roots and shoved them forward until all got a better view. It must have taken the proprietor two days to straighten them back into place again.



LORING WAGNER, HAYNES, WITH JAPANESE COUNT AS PASSENGER

Sunday at Boston, Mayor Hibbard turned over one of the municipal steamers to take us down the bay for a fine sail, shipping plenty of both kinds of refreshments along with us. The boat, by the way, was a little jest in itself, for it proved to be the Monitor, which is used to transport the local prisoners to their "hotels." For awhile we busied ourselves trying to lock each other into the little compartments used as cells.

Milton Lusk, at the keyboard of the Gabriel horn-organ car, provided endless amusement, for he played almost every tune we had ever heard and many that we had not. At each place we would stop for the night, a crowd would pile into the car and tear around singing Glidden tour songs to his accompaniment. Some of those classics which we yelled with lusty lungs were wild indeed, such as "Tour Days," to the air of "School Days"; also that one to the tune of "The Garden of Love," beginning "Won't someone kindly tell me, won't Hower answer why——"; or another, "Listen here, Hower dear, I'm afraid to check in after dark."

At Milford, Pa., there was no end of kicking about hotel accommodations. Many of us went up to our rooms to retire that night and found our beds already occupied by others—about three to a bed. At this place they gave us most any old thing to eat—old shoes fried, stewed blankets, blanc mange made from rubber tires, and things.

It was when we departed from this spot that one of the most novel ideas of the whole tour sprang up. A publicity man and a playwright, got their heads together with a few of their comrades and painted pretty signs to post on trees along the route. Such inscriptions as: "Hurlburt spare this tree!" "I assume you are all present" (Hower's favorite phrase when addressing a meeting), "Ain't it awful, Mabel?" and a few more.

One of the most ludicrous was posted on a tumble-down dirty little hovel, inhabited by Italian laborers, and read: "A bath with every room." This appealed to some of us who had experienced the no-bath inconvenience, notably at the Avondale, where some of us were lodged in Bedford Springs—a hostelry which possessed no bathroom!

The observers were a quaint set. "Shock observers," they were called, and what some of them did not know about cars, was well worth knowing. At the start the observer appointed by Mrs. Cuneo turned out

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to be a young newspaper man who had never ridden in a car. When he was assigned to A. L. Kull's Gyroscope, the driver had all sorts of fun with him. This car was known as "Kull's Giraffescope—eats leaves off trees," and when the machine would stop, either to chew foliage or on account of tire trouble, the observer never knew whether or not the engine was going —an important detail, as extra time was allowed for tire changing, while an engine was kept in motion.

"Is that motor running now?" the observer would blandly inquire. And Kull would reply: "Why feel the radiator; it's hot!" If the radiator was hot, the observist took it for granted that the engine was running. It was most interesting to hear this young chap naively relate all this and tell how Kull used "magic powder" to make his auto go. When the friction drive would get stopped with oil, so that the fly wheel and transmission wheel would slip, the driver would take a handful of "magic powder" from the middle of the road and throw it between the friction wheels. As a result, the machine would jump more like a kangaroo than a giraffe, and sometimes even stall the motor.

The observer who attracted the most attention was Kenneth R. Otis, who weighed 325 pounds. He was a handicap to any car that carried him and he knew it and did not care either. It was while transporting him across the White mountains that one of the Marmon cars crushed a wheel.

One of the Haynes cars carried a young Japanese, Mr. T. Ninagawa, who for publicity purposes was said to be a count, sent here by the Mikado to study motor car manufacture. This, however, he personally denied. I asked Ninagawa, who speaks very good English, to write on paper what he thought of the tour. What he quaintly wrote is printed here, as he penned it, merely to give his own views in his own characteristic fashion, and in no sense of ridicule.

"Perhaps one of the most serious and reliability testing cars is the Glidden Tour. I have been studying the automobile trade last three years and I feel I want to take like this reliability touring contest. So I am glad that I could get a seat in the Haynes, which is one of the best make.

"The car which takes the reliability contest proves it quality, even if it run only one day. I mean that a car which contests in the Tour only one day is better testing in the round city or town a week or fortnight.

"I am very surprised that American roads is most nearly perfect in condition. Anyway, I believe that American made is further more better than high priced European made.—T. Ninagawa."

Scenically, the tour this year was far and away ahead of that of 1907. A more varied panorama of beautiful country could not have been arranged. For this, the "Pathfinders," L. M. Bradley, Lai Lewis and others, acting under Mr. Hower's instructions, are to be thanked, in this respect, mountains in Pennsylvania, the Berkshires, White and Green mountains, and rivers of New England, the gorgeous blue lakes of Maine, were all that could be asked for in the way of superb landscapes. Most of us on the tour were normal persons, with sane ideas and opinions, but those mountains near Rangeley and in Vermont made us come very near raving over their beauty.

At Rangeley, by the way, we found considerable fun in a very serious melodramatic piece at the local opera house. It was entitled "The Convict's Daughter," and played on a stage that would have fitted into a hall room. We grew so enraged at the horrid villain that we nearly wrecked the show during the first act. His "dirty work" was more than we could stand. We livened up draggy parts of the play by interpolating dashy Glidden tour songs until some part of the second act, when we marched out, much to the relief of the natives, the company and the villain.

"THE MILLION DOLLAR KID."



RAPID TRUCK SERVING AS "BAGGAGE TRAIN"

Point Breeze Squabble Settled.

All is harmony now between the Quaker City Motor Club, the Norristown Automobile Club and the American Automobile Association, following an explanation by Secretary Edwin S. Nyce, of the Norristown club. The squabble arose when the Quaker City Motor Club learned that the racing board of the governing body had granted a sanction to the Norristown club for a meet that was to have been held at the Point Breeze track, Philadelphia, last Saturday, 25th inst. The Philadelphia club considered the invasion of the Norristown club rather presumptious and complained to the American Automobile Association, whereupon the sanction was rescinded. Secretary Nyce explains the Norristown club's position in the matter by saying that for a slight service rendered to his club by I. C. Minford, a Norristown promoter, some time ago, he agreed to procure a sanction for Minford's proposed meet at Point Breeze. According to Minford the enterprise was purely a private one for which only he and a friend were responsible. He says that all the moneys received from the sale of tickets, as well as all the entrance fees have been returned, and the only losers are himself and his associate, who had purchased a number of trophies and incurred considerable other expense incidental to the meet. As the American Automobile Association has since appointed a special committee to examine into applications for sanctions, it is thought that future mixups of the sort may be avoided.

Good Tire Record on Glidden Tour.

Reports compiled by observers and given out by the Diamond Rubber Co. show an average tire cost per car of $46.91 for all cars in the Glidden tour, contestants and non-contestants. The average cost for Diamond tires alone was $16.88, considerably better than the average for the whole tour. The average cost per car for tires excluding Diamond equipment, according to the same authority, was $64.94. The basis of cost is taken with size 34x4 representing the general average of tire sizes used. All items, even punctures, etc., capable of ready repair, are taken into the account, but the big feature of the tire cost was the blowing out of casings and tubes. Of 61 blown-out tires all told, the number of Diamond tires so damaged was five, with 21 contesting and non-contesting cars using the Diamond make. Of the 22 contesting cars with perfect scores at the end of the tour, nine were equipped with Diamond tires. Two cars changed to Diamond equipment en route.

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DECLARES CITY LAW PARAMOUNT

Illinois Court Holds that Local Automobile Regulations Supersede State Law—Hits at Class Legislation.

Automobilists of Illinois are interested in the decision handed down last week by Circuit Judge Craig, who holds that local ordinances take precedence over State laws. The decision was rendered in the case of A. G. Woodbury against Dr. J. Addison Brown, of Champaign.

In arguing on a demurrer, counsel for the defense held that automobiles were entitled to go at a speed of 15 miles an hour, as that is the limit placed upon them by a law recently enacted by the Illinois general assembly.

The court held that the ordinances of the city of Danville which regulates the speed of vehicles on the streets should govern in all cases; that the legislature has no right to legislate for cities in that regard, and that the State law referred to should be disregarded.

It was held that in picking out automobiles from a score or more forms of vehicles and attempt to regulate their speed was a form of class legislation.

Jersey Justice for Joy Riding Chauffeur.

Having twice failed to appear before the Commissioner of Motor Vehicles of New Jersey after he had properly been summoned, Fred C. Tysen has lost his chauffeur's license, which has been revoked by Commissioner Smith. The reason for the revocation of the license lies in the alleged act of Tysen who, it is said, on May 25th last took his employer's automobile without permission, and, accompanied by some friends made a tour of Bergen county. During the trip the automobile collided with two peddlers' wagons; the accidents were investigated by the motor vehicle inspector of the district who forwarded a report of the matter to Commissioner Smith. Tysen was given two opportunities to present his defense, but when he failed to appear his license was revoked. He now will be subject to arrest if he attempts to drive a motor vehicle in New Jersey.

Pennsylvanians Plan a New Highway.

An improved highway across the State of Pennsylvania, from north to south and following the general course of the Susquehanna River, is the aim of a movement into which the automobilists of Wilkes-Barre have entered with spirit. It is the result of a proposal emanating from J. W. Hunter, State Highway commissioner of Pennsylvania, who suggests that the 67 counties of the Keystone State be connected by State roads. The Wilkes-Barre enthusiasts want a stretch of improved highway from Binghamton, N. Y., to Baltimore and declare this is by no means so much of an undertaking as may seem at first thought, as many stretches between the two cities already are in first class condition. They propose that the road shall go through Montrose, Tunkhannock—with a spur to Scranton—Wilkes-Barre, Bloomsburg, Danville, Northumberland, Duncannon, Harrisburg and York, meeting the proposed east and west Pennsylvania State trunk road at York.

Political Defeat Charged to Motor Car.

Charging his defeat to the unreliable running of the motor cars which were employed in connection with his election campaign, M. Jean Camper, who contested the Aisne Department against M. Doumer at the last general election for the Chamber of Deputies, sought and obtained damages from the company from whom the cars were hired. The bill for car rental for the eight days service was 600 francs, or about $120. In addition to this the outlay for repairs was included in the penalty imposed by the courts, and the sum of 200 francs, or $40, as balm to his personal feelings.

Novel Claim for Nullification of Sale.

Basing his action on the very novel claim that the engine is too powerful for the car, in consequence of which the frame failed to retain its shape, a citizen of Omaha, Neb., has brought suit against the maker of his car for $3,515, the amount paid for it last March. He claims that the car was sold to him on the representation that it was as good as certain other specified standard makes. Questioning the accuracy of the assertion he now wants to return the car, and seeks to compel the manufacturer to accept it and refund the purchase price.

Automobile Mail Service for Tinley Park.

Again have automobiles received official recognition from the United States government. This latest instance of progressiveness is apparent in the new arrangement made by the post office department for the use of motor cars to carry the mail from the Tinley Park post office in Illinois. Under the new order the three carriers of the rural mail have been supplied with cars and now cover their respective routes in a much shorter time than they did when horse-drawn vehicles were employed for the purpose.

Speed Limit Suspended for Taft.

"Casey, the Cop," whose swift motorcycle has enabled him to catch many speeding automobilists in New York, personally superintended a suspension of Manhattan's speed regulations, recently, in order that candidate Taft could cross the city quickly on his way to the President's home at Oyster Bay. The car, a White steamer, went across town in a whirl, and after crossing the East River ferry, gave Taft the speed he so much enjoys.

WOES OF THE FAMILY CHAUFFEUR

His Many Duties and Long Day of Labor—May Possibly Get Needed Sleep in the Winter.

When a chauffeur works for a whole family instead of for one person, he is not infrequently the victim of very long hours. The women of the household find uses for the car almost immediately after breakfast, for shopping, marketing, visiting the dressmaker, and other morning errands, while after lunch the car is kept equally busy in the round of afternoon social and pleasure trips. Sandwiched in between the periods when the women of the family are using the machine, come the calls to take the head of the household to and from his place of business or the club. In the evening the demands of conveyance to the theater, dances, concerts or receptions keep the chauffeur on duty until almost midnight, after which he is still subject to the call of his employer for nocturnal excursions that may last until 4 or 5 o'clock in the morning.

In some cases the chauffeur finds that the sequence of calls on his driving from after breakfast until dawn the next morning is not mere occasional happening, but a more or less regular thing. It is but natural that in such situations he should do a little grumbling to outsiders occasionally, relating his troubles.

"When does your chauffeur get a chance to sleep?" asked the friend of a man whose car is in commission about 20 hours out of the 24.

"Sleep?—sleep?" repeated the chauffeur's employer. "Why he gets all winter to sleep, don't he." And he turned to other matters in a way to indicate that there was nothing more to be said.

Running Expenses of Ramblers.

In the Maintenance Number" of the Rambler Magazine are given statistics of the running expenses of about 200 Rambler owners, nearly all of whom are now driving their second, third, fourth or fifth Ramblers. The figures, which represent running expenses in 43 different States in the Union, are averaged to show a distance per car of 12,254 miles. Interspersed through the pages are letters from various owners stating their experiences in the matter of costs and giving numerous experiences which are of uniform interest. These include sundry rather novel commercial applications, sometimes of cars intended primarily for pleasure purposes.

Good Roads Lesson for Farmers.

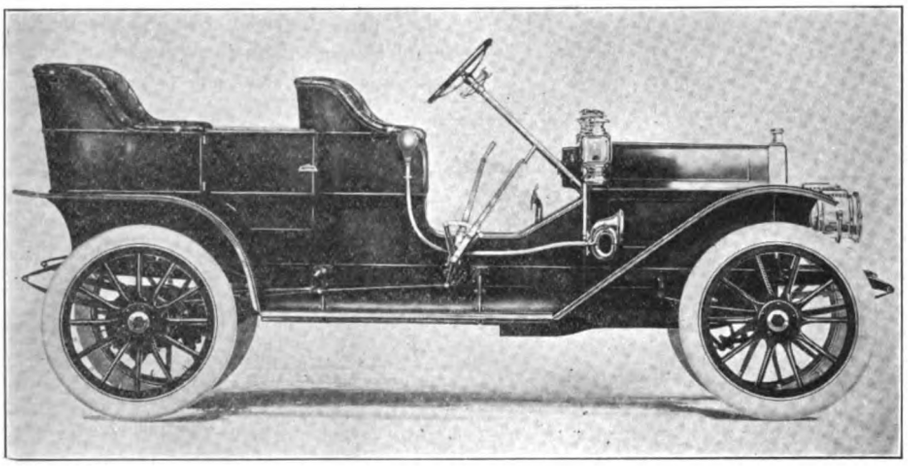
In Colbert county, Alabama, at a recent assemblage of farmers, $12,000 was raised by the tillers of the soil with which to build an "object lesson" road, turning the whole matter over to a government expert.

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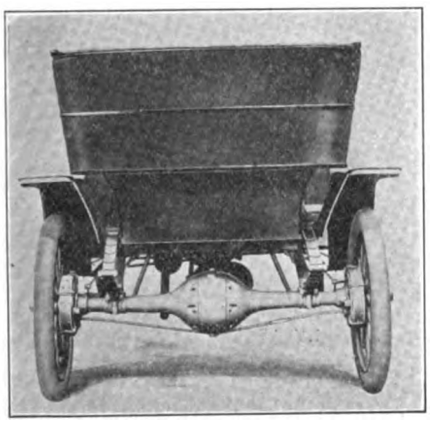
INNOVATIONS IN E-M-F MODEL

Characteristics of the Latest New Comer in the Automobile World—Details of Construction and Equipment.

Wholly aside from the interest stimulated by the announcements of the formation of the Everitt-Metzger-Flanders Co., Detroit's huge new concern, the E-M-F "30, details of which have just been disclosed, proves to be a marvelously complete study in design, and a most promising innovation to the five-passenger class of car. That such a car can be produced at the modest figure of $1,200, speaks volumes for the capability of the modern production engineer, as it does for the faith of the men who are his sponsers. In brief, it is a car built from designs that fail to reveal the marks of economy which its low selling price would seem to indicate, but which so far as they exist are not of a character to obtrude themselves upon the attention.



THE NEW E-M-F THIRTY—SIDE VIEW

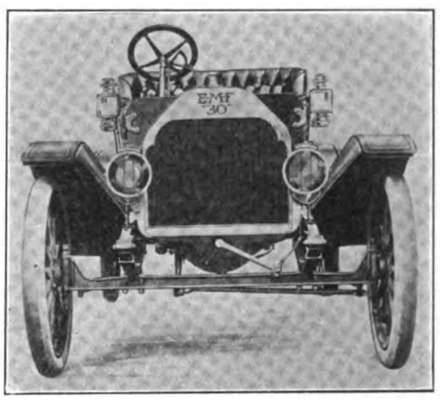


BACK OF E-M-F THIRTY

The general appearance of the machine, as may be gathered from the illustrations, is neat and sufficiently conventional, without being in the least suggestive of the unusual element concealed in its makeup. The touring body here shown, is but one of four types which are to be produced. The others are respectively, a runabout of standard form, a roadster, with single or double rumble, according to the taste and requirements of the purchaser, and a "demi-tonneau," which is heralded as "an E-M-F innovation,"—one of several, it should be mentioned in passing—which is a 4-passenger car of original form, having a detachable tonneau, which when removed, leaves room for trunks or other luggage or touring impedimenta. The raking steering column, long, sweeping fenders, enclosing the sides, seating arrangements and general mounting of the externals, are such as current usage has approved. The standard equipment, it should be added, includes side oil lamp, lamp, tube, horn, tire kit and tools, and the magneto.

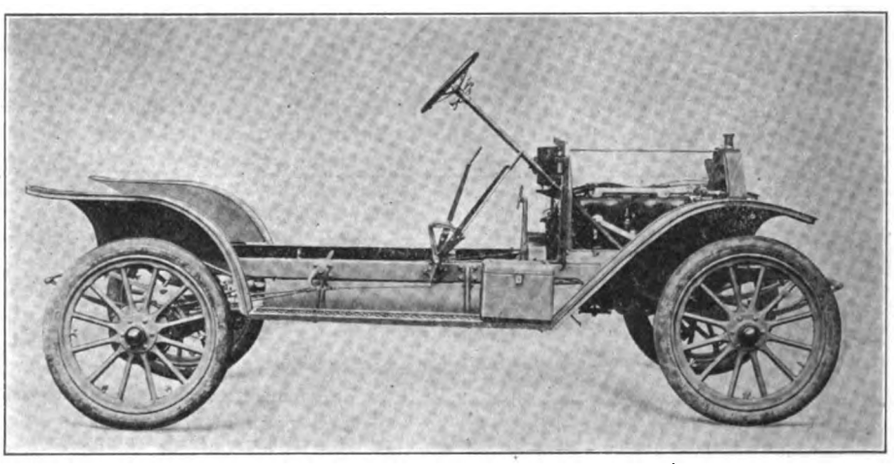
The wheel base is 106 inches, tread standard, the weight of the touring car complete, 1,800 pounds. The wheels are 32 inches diameter, shod with 3½-inch tires all around. The brakes act on the rear hubs, are of the external-internal type, and are designed in such a way that the motion of the car after they have been applied tends to increase their pressure. The service brakes, being on the outside, are readily adjustable. The suspension comprises semi-elliptical front springs, and full elliptic, rear. All driving thrusts, traction and braking strains are taken by radius rods. The frame, which is of pressed steel is unusual in that it is of U section rather than the more familiar I-beam or channel type, and that it has perfectly straight side members, no offsets or bends being employed.

The mechanism of control is of the usual



FRONT VIEW, E-M-F THIRTY

type, barring one important detail. That is to say, the motor control levers, instead of being placed on the top of the steering wheel, are located beneath it, and on the left side. The arrangement is such that they can be actuated by the fingers of the left hand without removing them from the wheel. The right hand thus is left free at all times for the manipulation of the brake and gear shifting levers.



CHASSIS OF NEW E-M-F THIRTY

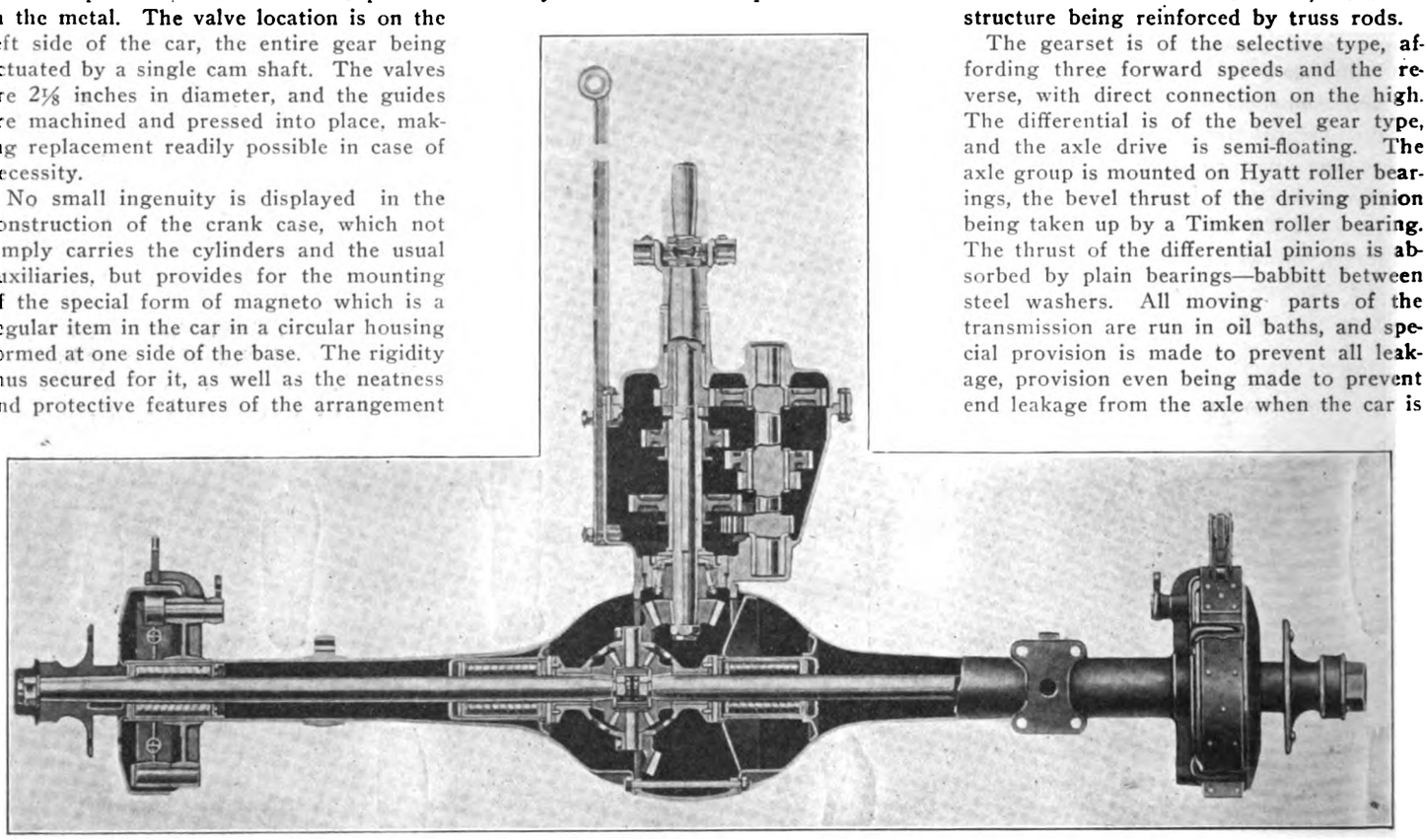
Coming to the details of the power plant, the chief points of interesting design are brought out. As its designation indicates, the motor is rated at 30 horsepower—the use of unusually large valves, unobstructed and direct ports, and accurately balanced parts, being held to account for a nominal output somewhat greater than usually is assigned to a motor of 4 by 4½-inch cylinder dimensions. The cylinders are cast in

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pairs, with integral jackets, the water space being carried entirely around the bores, thus providing for absolutely uniform cylinder temperature, and a uniform expansion in the metal. The valve location is on the left side of the car, the entire gear being actuated by a single cam shaft. The valves are 2⅛ inches in diameter, and the guides are machined and pressed into place, making replacement readily possible in case of necessity.

No small ingenuity is displayed in the construction of the crank case, which not simply carries the cylinders and the usual auxiliaries, but provides for the mounting of the special form of magneto which is a regular item in the car in a circular housing formed at one side of the base. The rigidity thus secured for it, as well as the neatness and protective features of the arrangement

Lubrication follows the well-tried splash bath style, but is regulated by a constant-level system of control, with vacuum feed. This system is such as to permit the use of

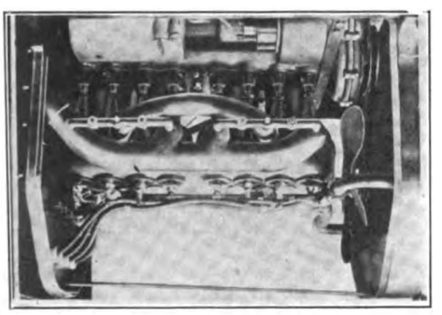


REAR AXLE OF E-M-F THIRTY, SHOWING TRANSMISSION

ensures a practically perfect union of the parts. The center section forms the rear end of the gear casing, and is a casting, to which the end sections are bolted, the whole structure being reinforced by truss rods.

The gearset is of the selective type, affording three forward speeds and the reverse, with direct connection on the high. The differential is of the bevel gear type, and the axle drive is semi-floating. The axle group is mounted on Hyatt roller bearings, the bevel thrust of the driving pinion being taken up by a Timken roller bearing. The thrust of the differential pinions is absorbed by plain bearings—babbitt between steel washers. All moving parts of the transmission are run in oil baths, and special provision is made to prevent all leakage, provision even being made to prevent end leakage from the axle when the car is left standing on an incline or in running on grades. This attention to minor detail is characteristic of the construction throughout, and the design of the various parts discloses forms which in their adaptability to the most advanced manufacturing methods,

are particularly commendable. Contrary to usual practice, the supporting arms are not formed integrally with the case, but are of pressed steel, U-section, like the main frame, and at once stronger and lighter than the ordinary method of support.



E-M-F MOTOR

The crank shaft is offset ¾ inch, and in order to further improve the running of the motor, all reciprocating parts are weighed and balanced in the assembling process. The connecting rods are drop forged, the crank pin bearings being of equal length on each side of the rod. The bearings are lined with die-cast babbitt. The crank shaft bearings are a special babbitt, known to the trade as "white metal" alloy.

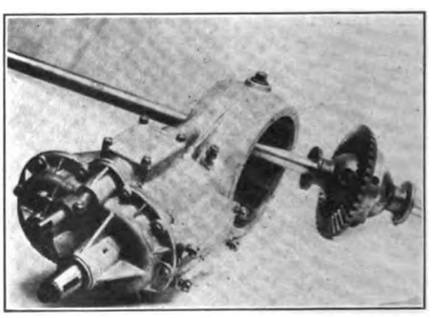
very large feed pipes—⅜-inch—without danger of flooding or loss of feeding control.

The ignition system includes in addition to the magneto, the dashboard coil, which is so mounted as to leave no wiring exposed; batteries distributor, and switch. It is important to observe that no portion of the system is exposed, all running parts of the magneto, like its drive, being fully enclosed in the above-mentioned crank case housing.

The cooling system follows the thermo-syphon plan, a belt-driven, stamped steel fan being the only moving unit included in it. The carburetter is of an improved float feed type, regulable from the driver's seat, and located on the right side of the car, away from all piping and other encumbrance.

The transmission comprises an unusually neat embodiment of the unit change-gear-axle type. The master clutch, which is an expanding ring, leather faced, is mounted in the fly wheel in the usual manner. The driving shaft is equipped with two universal joints, torsional resistances being taken up by a single torque bar, brought well forward on the frame.

The axle unit is composed of a right and left section, drawn from sheet steel and heat treated. It is of very light design, and embodies in its construction the much-discussed autogenous welding process, which



PARTIALLY ASSEMBLED TRANSMISSION

without a shade of sacrifice in efficiency so far as the finished product is concerned, show a most ingenious combination of manufacturing and designing considerations.

Supplementary spiral springs have created for themselves such a steady demand, according to the Supplementary Spiral Spring Co., of St. Louis, that the business this year is over 300 per cent. greater than it was last year.

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ABOUT TWO-CYCLE ENGINE DESIGN

Requirements as Specified by E. W. Roberts in Address to Engineers—His Methods Stated and Explained.

While the fund of general information concerning matters relating to the design of the four-cycle motor is of fairly comprehensive scope, it is equally true that comparatively little is known outside the draughting rooms of the few successful designers, of the requirements of the two-cycle motor. On this account the information collated in the shape of a series of notes on two-cycle engine design, presented recently before the Mechanical Branch of the Association of Licensed Automobile Manufacturers, at a meeting held in Cleveland, is of no small importance as a matter of reference and record. The author of the address, Mr. E. W. Roberts, has held an enviable position as a gas engine authority for a number of years.

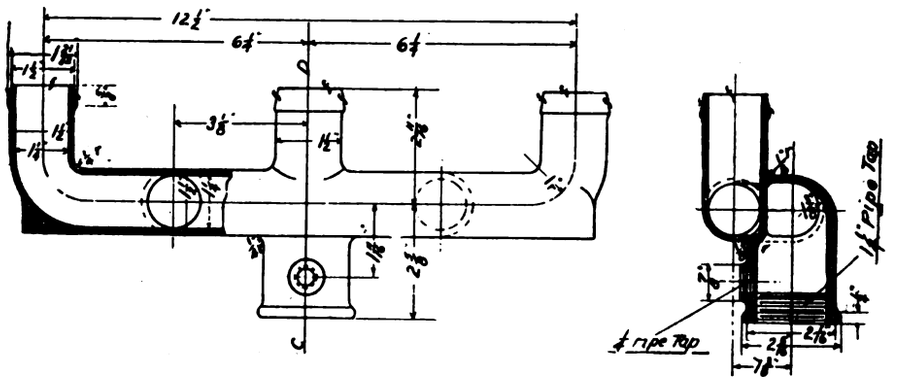


Fig. 1

The relative power of the two and four-cycle types has been held in question for a long time. Mr. Roberts states it as his experience, that about 1½ times as much power can be obtained from a two-cycle as from the more common type. A new two-cycle motor of 4½ by 5 inches cylinder dimensions, has been found to develop 19.89 brake horsepower.

One characteristic of the type, which he mentions as important in connection with its service in automobile work, is the fact that in general it develops more power in proportion at low speeds, and holds up its load tenaciously when doing heavy duty. "This is due," he explains, "to the fact that they are low in torque at high speeds, owing to being choked. . . . . The speed of the air entering the crank case during 90 degrees of the piston travel and at 900 to 1,000 r. p. m. . . . . is enormous. As I remember, a 4½-inch by 5-inch intake figures out 190 feet per second at 900 r. p. m. With a 1½-inch intake, the port will be about 2¼ inches long, measuring along a chord of the cylinder bore. With a 2-inch intake, the area is ⅝ inch greater and the ports are correspondingly longer."

Turning to the very important feature of timing and the laying out of the cylinder ports, he says:

"The usual practice, as I have seen it, is to open the inlet valve at or near the head center and hold it open until the other center is passed. . . . . The practice I have always gone on in the opening of the intake, both in the four and the two-cycle, is to hold open as long as possible without blowing back at moderately low speed. In two-cycles, the time of opening is limited in this way. If we are to use only one carburetter on a four-cylinder engine, we must not have two intakes open at the same time, and, therefore, we have to use a little less than 45 degrees on each side of the center. So the intake must be open a little less than 90 degrees; 43 to 44 is about what I use.

"The exhaust timing is not so important in this regard, if the exhaust is so carried off that the gases from the various cylinders will not interfere with each other.

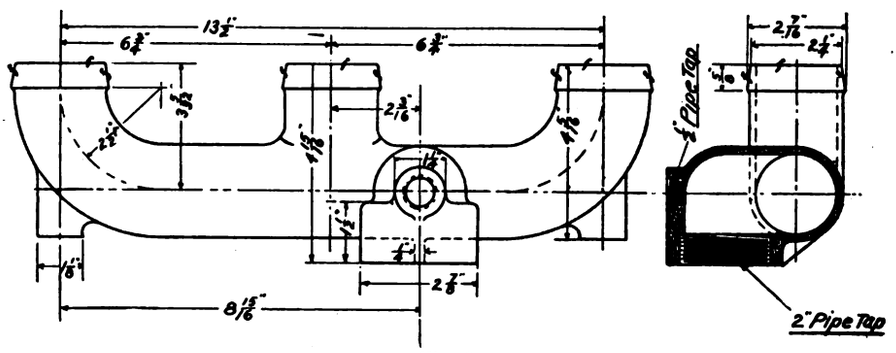


Fig. 2

"For the intake port to the crank case, I usually leave an opening as follows: I would start to open the port 44 degrees before the piston reaches the head center. You know that this port is opened and closed by the lower edge of the piston. The opening and closing will take place at the same angular position of the crank pin. This will, you see, leave the intake port open during 88 degrees of the crank circle. Now in a single, or two, or a three-cylinder engine it is practical to leave the port open a little longer, and I have used as much as 48 degrees on each side of the center, without a blow-back through the carburetter.

" . . . . The cylinder inlet port or that which communicates with the transfer port leading to the crank case (in the plain, three-port engine) . . . . . can be kept open for the same time as the inlet port to the crank case, i. e., about 90 degrees. In the large ported, high speed motors, I have had to reduce this somewhat. It must be remembered that the cylinder intake port should open after the exhaust port. This is in order to allow the pressure in the cylinder to fall below that in the crank-case before the port leading to the crank case starts to open.

"It is my custom to make the opening of the exhaust about 58 and 59 degrees on either side of the center. It must be remembered that the exhaust must not only open soon enough but it must also open full enough to prevent any chance of the hot gases rushing back through the transfer port to the crank case, and thus cause a crank case explosion, or, as it is often called, a 'backfire.'

"You can prevent this to a certain extent by the use of a screen in the bypass, but I have very little use for a screen as a rule because they are troublesome to take care of. They choke up very easily and the easiest way to clean them is to put in a new one.

"As I have already pointed out, in the ordinary type of slow speed marine engines with small port areas I have used 90 degrees as the port opening for the cylinder inlet. But when I enlarged the ports for efficient running at high speed, this angle proved too great. I am unable to tell you the exact angle off-hand, but on 5-inch stroke the distance along the piston travel was reduced ⅛ inch.

" . . . . When laying out the ports of a two-cycle, ... always lay out the angles on the crank circle and work to the points these angles will give you, and remember that it is a case of time and not distance. Another thing you must bear in mind. That is, the shortness of the time that the two-cycle three-port intake is open as compared to a four-cycle. You must have a larger area than you would with a longer opening. While the crank case inlet

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of a two-cycle motor is open by 90 degrees, the inlet valve of a four-cycle is open anywhere from 200 to 210 degrees. Let us say 200. You will see, therefore, that you have in a four-cycle more than twice the time of opening that is employed in a two cycle of the three-port type. Hence the area of the intake must be more than twice as great in the latter as in the former. Common practice is to keep the average speed of the ingoing air at the normal speed of the engine, down to 100 feet per second.

"In order to keep close to this speed in a 4½ inch by 5 inch engine, I have had to use a 2 inch carburetter. That would be enormous on a four-cycle, as about 1¼ inch would be ample.

In order to keep the rings from jumping in the ports when they are so long it is necessary to use bars across them. I find the best way to make an exhaust port bar is to core it hollow and run water through it. . . . .

"The lowest crank case compression that I have found to give good results is 4½ pounds. I usually aim to get between 6 and 8, and most of my engines have 8 pounds. . . . . .

"In my judgment 8 pounds is about right, and I find if I go beyond 10 pounds I am likely to get into trouble. You will find that a great many designers who are just starting on the two-cycle engine proposition have the impression that it is necessary to get the highest possible pressure in the crank case. And, in order to get it, they use filling blocks, that is, discs attached to the crank webs. I find that by making the crank case as close to the moving parts as possible, leaving approximately ¼ inch clearance, I usually obtain 8 pounds crank case compression. In other words, I follow as closely as possible the path of the crank shaft and the connecting rod.

"With reference to keeping the crank case tight, there is a mistaken impression that as the engine wears the crank case will leak along the shaft; and quite a number have attempted to use packing to prevent it. This can be done quite readily on single cylinder engines, but on a multiple-cylinder it becomes quite a difficult proposition. The best practice is to use something that will stand the wear and use a comparatively long bearing; I am using die-cast nickel babbitt. . . . .

"Crank case explosions are due generally to the exhaust gas in an incandescent state rushing down through the transfer port and setting fire to the mixture in the crank case. Sometimes they are due to an overheated crank case. . . . . the period of inflammation of the mixture is the same in fractions of a second for the same proportion and for weak mixture the period of inflammation is longer than for high compression and rich mixture. Now one of the necessary points in avoiding crank case explosions is to get the flame out when the intake port opens so as not to set fire to the incoming charge, that is, the charge that is entering the cylinder from the crank case. Therefore, when running on low compression, it is necessary either to enrich the mixture or advance the spark. Therefore you can quite often stop crank case explosions at low speeds, or in fact at any time, by advancing the spark. . . . .

There is quite a little importance in designing the deflecting plate so as to get the best results. I get very good results by turning the ends of the deflecting plate toward the cylinder wall. In large engines the top of the piston should slope away from the deflecting plate towards the exhaust port. The deflecting plate should project from the piston as far as the clearance will allow, making it reach within about 3-16 inch of the cylinder head when at the end of the stroke. . . . .

"The best position for the spark plug is, I believe, directly in the center of the cylinder. If it is placed on the side of the cylinder, especially on the exhaust side, it is apt to require too much lead. The two-cycle engine is very sensitive to spark plug placed in a pocket; for it will increase the lead and if you do not get enough lead at light loads you are very likely to get crank explosions. . . . .

"For the exhaust manifold I use a long curve in the form of a U which leads the gas from two-cylinders. In a four-cylinder engine I join these two by a long curved Y pipe so designed that the exhaust does not interfere with that of another pair of cylinders. With three cylinders or less we do not have to be quite so particular, but still it is best to let the exhaust out with as little resistance as possible. In my small motors I use a straight pipe with the branches from the various cylinders curving into it. This makes a very convenient form, but is not quite so efficient as the manifold with the large curves.

"The intake manifold needs careful attention, and if not properly designed will cause one cylinder to get more gasolene than another so that while one cylinder is getting the proper mixture the other will be flooding. The best form of intake manifold for a three-cylinder engine is shown in the accompanying drawing (Fig. 1). In another form I tried bringing the mixture down from above so as to raise the carburetter and found that the reversing of the current has a separating action and causes the gasolene to deposit in the corners of the manifold. It was compelled to abandon the pouch and go directly to the straight pipe joining the three cylinders, as shown in the illustration of the larger manifold (Fig. 2). . . . .

"No matter how well designed your intake is, if the carburetter does not give a homogeneous mixture, one cylinder is sure to get more gasolene than the others. The carburetter must be such that it will give a homogeneous mixture. You must remember that the suction from the intake port of a three port engine starts with a high vacuum and the air goes through the carburetter with a rush. For example, when one of our large engines is running by a belt at 300 revolutions, a board held ¾ of an inch from the opening will be pulled out of your hand. In fact, I have placed a box weighing 8 pounds against the intake and the suction held it there. . . . .

"I formerly held to the opinion that the only proper place for a throttle for a two-cycle engine was in the by-pass or transfer port. The theory was that if you throttle at the carburetter you weaken the pressure in the base, and that the pressure in the base being lowered would not resist the rush of the flame from the spent charge in the cylinder. I assumed that by throttling in the by-pass I would retain the pressure in the crank case and at the same time choke the passage and between the two prevent the burning mixture from rushing down into the crank case. This proved good practice with an ordinary carburetter that did not give a good mixture, but by using a carburetter which gave a good mixture I found I got better results by throttling at the carburetter. . . . .

The only thing that I take into consideration (in connecting rod design) is the clearance in the crank case and try to make it as close as I can; and I always use as short a connecting rod as possible; 1.8 times a stroke is about as short a rod as I dare use. For instance, I would use a 9-inch rod for a 5-inch stroke. . . . . If you wish to hold the same conditions in one engine as in another, you must keep the area in the same proportion to the stroke. From 3½ to 4½ times a stroke is the area that you will find gives the best results. I have designs in all kinds of proportions. The bulk of them I have made run from 4½ by 5, to 3 by 2½. . . . .

"The construction of two-cycle engines requires very careful work. I find it advisable to mill the ports by using a milling cutter of small diameter and drop the cut right into the port. This gives the right width and the right distance from the end of the cylinder. If you do not get your ports right you will get into trouble. A great many manufacturers file them to gauges, but this is troublesome and inaccurate. You really have got to grind a two-cycle cylinder to get good service, because a reamer will jump more or less in going over the ports."

Extinguishing a Carburetter Fire.

A simple method of extinguishing a carburetter fire, given by a foreign expert, is that of turning off the main fuel supply from the tank and racing the engine. This, it is claimed, will tend to create sufficient draught through the intake pipe to keep the flames within reasonable limits, while the amount of fuel contained in the float chamber is so small that the fire will soon waste itself without doing any damage, expiring as a matter of course as soon as the fuel is exhausted.

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MAGNETO WITH STATIONARY COIL

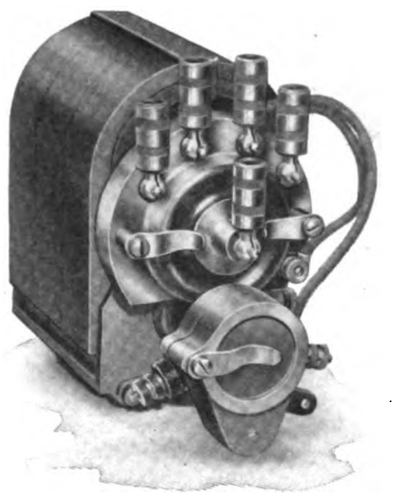
How the Armature is Supplanted in New Remy Device—Arrangement for Provisional Use of Batteries.

One possible objection to the construction of the ordinary type of magneto is that in the production of the primary current, the inert battery is replaced with a moving part—the armature—in which the current is generated, and from which it must be conducted to the transforming and distributing devices through a moving contact. Except for this, the apparatus employed is practically the same as that required for the more familiar battery and coil system. In the Type "L" Remy alternating current, high tension magneto, which has just been brought out by the Remy Electrical Co., Anderson, Ind., this objection is eliminated by the use of a stationary coil. The "inductor," corresponding to the armature of the ordinary magneto consists merely of a simple forging mounted on a steel shaft. The simplicity thus secured constitutes an asset of no mean value.

In its general construction, the magneto is of conventional pattern. Let into the pole pieces of the magnet is a single coil of No. 18 magnet wire. The "lines of force" of the magnetic circuit, passing through this, are reversed at each half revolution of the driving shaft, thus generating two current waves in the wire for each revolution. The primary winding thus constituted is connected with the primary of a non-vibrator spark coil, an interrupter, properly adapted to the type of motor to be ignited, being interposed in the circuit. By special design, the "current wave" is of considerable duration, thus permitting considerable latitude in timing, and the circuit is mechanically broken, during the period of its maximum intensity. Variation in the time of the break is accomplished by shifting the circuit breaker around the shaft on which the cam is mounted.

After passing through the coil and being "stapped up" to the high tension suitable for ignition purposes, the current is returned to the distributor of the magneto, through a single wire. The arrangement of the latter as well as the speed of the driving shaft, depends upon the number of cylinders to be fired. With the four-cylinder, four-cycle motor, the inductor is rotated at the speed of the crank shaft. With the six-cylinder, four-cycle motor, it is driven at one and one-half times the speed of the crank shaft. With the double-opposed motor, the inductor is driven at the same rate as the crank shaft, but the distributor is omitted, and the circuit breaker is fitted with a single cam.

Provision is made in the construction of the coil and switch, for the use of batteries in connection with the magneto, but without the use of a second coil. The switch also is provided with a push-button for use in starting "on the spark," when the batteries are in circuit. As the coil is intended primarily for magneto service, it is capable of handling an unusually high current strength, so that a very strong starting spark is produced at the plugs. While the batteries are in service, the current passes through the magneto, the regular distributor taking care of the secondary circuits. In this way, the system acts in precisely the same way as when being used with the



self-induced current, except that the primary is derived from a constant source.

Successful Handling of Tires.

It is a fact well known to tire men as well as to motorists of experience that tire life depends to a very great extent upon the skill and faithfulness of the driver. The rules for success in handling tires may be summarized as follows: First, find the maker's rule for inflating tires of the size and type employed on the car; then use a suitable gauge, and test them with sufficient frequency to maintain the correct pressure practically all of the time. Drive as straight as possible, avoiding car tracks and ruts as far as may be done, taking care not to turn the steering wheel any more abruptly than is absolutely required by the emergency. See that the differential gearing works freely and that neither of the brakes drags sufficiently to interfere with its action. Keep the tread surfaces free from oil, pick out loose gravel which may become embedded in the surface from time to time, close all small cuts promptly, and above all, learn to remove and replace the tires without pinching the tubes or tearing the beads on the shoe.

One of the Small but Important Parts.

One of the smallest pieces, and yet as important a part as any on an automobile is the minute platinum contact piece on the end of the adjusting screw of the coil and on the blade. Though an essential part it seldom exceeds one-sixteenth of an inch in any dimension.

TESTING TORTIONAL STRESSES

Experiments Show Ratio of Actual Strength of Propeller Shaft to Possible Strain—Big Factor of Safety.

Of interest as showing how far the factor of "guesswork" has been eliminated from the processes of designing and constructing automobiles, the results of a special test applied to the propeller shaft of the Rambler car may be taken as a typical instance. Under ordinary circumstances, the chief stresses brought to bear upon the shaft are torsional, or twisting, and due to the driving effort of the motor, on the one hand, opposed by the tractional resistances at the wheels, and the frictional losses in the transmission, on the other. Therefore the test applied to prove the actual strength of the shaft in relation to the work it may be supposed to be likely to perform, was a torsional test.

For this purpose, a short measured length of one of the regular shafts, together with the squared end upon which the gears are mounted, was gripped in the torsion machine and twisted, by means of a rack and pinion having a 2¼-inch radius of action, which corresponds exactly to the length of engine crank. The opposite end of the shaft being held perfectly rigid, the entire load was absorbed by the fibers of the shaft.

In this way it was found that 12,000 pounds pressure was necessary in order to twist the shaft, while a permanent "set," or distorsion, was developed under a load of 13,000 pounds. Under 14,000 pounds pressure, the squared portion of the shaft yielded, but was not permanently distorted until another thousand pounds had been added to the load, when the test piece was removed from the machine. It was then found that the shaft had been permanently twisted through a half turn, but without developing any sign of rupture. When it is stated that the maximum calculated pressure derivable at any moment from the engine is 2,800 pounds, the actual leeway allowed for emergency strains, or in other words, the factor of safety, is apparent.

Wheel to Ease the Work of Steering.

Efforts to improve the design of steering wheels, to make them as restful and convenient to the hands as possible, have not abated. One of the latest of the new ideas developed is a steering wheel form in which the rear half of the wheel rim has been cut away and a spade-handle form of grip mounted on each side. For all ordinary steering the effect is much like lever control, but when it is necessary to turn the steering mechanism to an extreme position, the rim on the forward part of the wheel is ready to the hand, so that it is not necessary to keep to the handles if they revolve to an awkward position.

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BRAND NEW ALLOY OF ALUMINUM

"Magnalium" Said to be Stronger and Lighter Than Its Basic Component—Its Greater Adaptability.

Among metals developed in connection with motor car construction perhaps none has been more rapidly advanced from a state of comparatively insignificant use to one of extreme importance than aluminum. Notwithstanding the almost universal extent of its present application, however, its use is limited by several considerations—among them its strength, and the fact that it cannot be forged, welded, or even soldered by ordinary processes. In a new alloy, "Magnalium," which is produced by the Magnalium Syndicate, of Berlin, Germany, many of these defects have been removed, as is claimed, by the introduction of a low percentage of magnesium.

Its value, particularly as applicable to automobile construction, is shown by the statement that it can be forged by hand or drop hammer, handling about like Swedish steel, and that it requires no special skill in treatment, so that it can be worked by the ordinary blacksmith or foundryman. Furthermore, it can be soldered by the use of a special solder, although it cannot be welded. It can be produced in rolled plates, bars, rods, wire and tubing, and in any form shows greater strength than the ordinary aluminum alloys, despite the fact that it is lighter. In machining, it is said to work much like brass, taking about double the tool speed of aluminum. It resists oxidation successfully, is not affected by dry or damp air, water, ammonia gas, carbonic acid, and most organic acids. It is slightly affected by sulphuric acid, and more rapidly by alkaline solutions, while its sensitiveness to the action of salt water is not sufficiently marked to be objectionable.

The specific properties of the metal, which is produced in several grades, ranging in composition from 90 to 98 per cent. aluminum, are given by its makers as follows. Specific gravity, 2.5, as compared with that of ordinary aluminum, which is 2.64; electrical conductivity, 56 per cent. that of pure copper; melting point, 1,185 to 1,250 degrees F.; specific heat, 0.2185.

Its strength, varying with the method of treatment, is given by the following comparisons. Sand castings, of "Class X" magnalium, 18,491 to 21,336 pounds per square inch, with a reduction of area of 3.75 per cent.; chilled castings, 22,759 to 25,604, with a reduction of 3 to 8 per cent.; Class "A," (90 per cent. aluminum), 69,890, with a reduction of 4.19. The strength increases under rolling and drawing treatment, the hard rolled plates of Class "Z" showing 52,203 pounds per square inch strength, with a 3.7 per cent. reduction, drawn wire, 41,000 to 53,000 pounds; drawn rods, 60,000 pounds, and drawn tubing, 74,000 pounds per square inch.

Magnalium is in use abroad in the manufacture of small utensils, such as ordinary aluminum has been employed upon more or less extensively, and in all branches of light manufacturing. Samples of the metal exhibit a close grain, characteristic white color, take and hold a good polish, and in the form of plates and rods, show a surprising amount of elasticity and strength. For instance, a spring wound from wire of about 3-16 inch section, for purposes of demonstration, develops a resistance which is really surprising. The American agency for the metal has been taken by Morris R. Machol, of New York City, who imports it in ingot, or in special forms as may be required.

To Clear a Cylinder of Fragments.

It occasionally happens that a broken valve or spark plug proves a source of considerable annoyance and expense because of the difficulty of removing the broken fragments from the cylinder. This difficulty is most likely to arise in motors which have cylinders mounting the valves in offset pockets, so that there is no really sizeable opening directly into the bore proper. Sometimes, probing with a wire or a pair of long-nosed pliers will suffice, but more often, the parts must be left in the cylinder to work whatever harm they may, while the car is run to the nearest garage on the other cylinders, pending opportunity to take down the cylinder and clean it out. A simple kink, suggested by one who has had plenty of experience of this sort, is that of jacking up one side of the machine as high as is possible, taking advantage of the pitch of the road at the gutter, whenever possible, and after removing the valves, cranking the motor as rapidly as possible. The loose particles of broken metal or porcelain will then be thrown upward by the piston, and ultimately will hop out into the valve pocket, from which they can be removed without further difficulty.

Speedometer Driven from Live Axle.

Although it has been supposed hitherto, that the constant action of the differential and the slippage of the driving wheels would prevent the successful exploitation of a speedometer made for attachment to the rear of a chassis, a British maker has had the courage to undertake the production of such a device, intended to be driven from the propeller shaft of live axle cars. Several points of advantage are claimed for the system, while it is asserted by the makers in question that the rear wheel slip, contrary to the general impression, is practically negligible.

Give the Battery Plenty Acid.

Users of storage batteries should bear in mind that the "life" of the battery is seriously affected if the acid does not cover the plates.

CARE OF THE IGNITION SYSTEM

Why the Insulated Wires Require Special Attention—Causes of Trouble and How to Combat Them.

Most of the ignition troubles which used to be such a bug-bear to the private owner, have now been removed by improvements in the design of the ignition system—a work of salvation for which it is impossible to give too great credit to the manufacturers of ignition apparatus. At the same time the present day owner who is at all neglectful, frequently finds himself in difficulties from which the only way out is the expensive and time-absorbing one of complete or partial re-equipment. That such dilemmas most commonly are caused by neglect, is aptly proved by the dearth of experiences of such a nature among users who are willing to devote a proper amount of time and attention to the work of maintenance of the machine.

"Probably there are no conditions so severe for insulated wire as those existing with the wires of the electrical ignition apparatus on a motor car," says a foreign expert whose experience in other lines has led to this conviction. "The constant vibration, dirt, dust, moisture, oil, that are constantly flying about all bring very severe strains upon the insulating envelope of the cables. Oil quickly softens rubber, and causes it to lost its insulating properties. Dirt and moisture have a nasty knack of getting at connections where wires enter, or pass under screws, and promptly commence to attack them. The vibration of the car is constantly tending to drive the metal parts through the insulating envelope of the conductors and to break wires off short at screws.

"All of these troubles can be guarded against and the ignition apparatus kept well up to its power, day in and day out, year in and year out, provided that it is well laid out in the first instance, and provided that some one is constantly on the lookout for possible causes of trouble. The cleanest of clean housemaids, if she could be set to keep the component parts of an electrical ignition apparatus clean, could not produce results too good for the requirements of a motor car."

Removing Gear Wheels from Shafts.

When attempting to remove sprockets or other gear wheels from shafts to which they are attached by means of taper or plain fits and keys, care should be taken not to use the hammer too freely, for fear of either fracturing the gear or springing it out of line. A so-called "pulley-puller," or special jack may be contrived without difficulty under almost any circumstances, and by its use the part may be removed without imposing any undue strains upon it.

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UTOPIA FOR THE AUTOMOBILIST

Ladies in Palmer Plan to Create the "City Automobile"—Not a New Vehicle, but a New Metropolis.

It all came about at a recent meeting of the Old Center Improvement Club. What? You haven't heard of the Old Center Improvement Club? Then perhaps you've never been touring over the sandy roads of a certain part of Massachusetts, tired, dusty and thirsty, with acres and acres of sand and never a drop—of water—to drink, and then suddenly run kerplunk into the free rest room at Palmer that was established by ten estimable ladies of Palmer's "old Center," and one of those ten estimable ladies poured out a cooling glass of lemonade for Marjorie and gave you a glass of iced tea—at least it looked like that only it had a spring of spearmint propped between the chunk of ice and the maraschinoed cherries—and you settled down in that big leather arm chair over by the northeast window and just blessed one-tenth of those ten estimable ladies and wished you could settle down there for life.

No? Then you don't know what you've missed.

Well, anyway, it was those same estimable ladies that form the Old Center Improvement Club, who were sitting in the automobilists' rest room the other day sipping their eau de vie de Dantzigs which has the cute little fiddlededees trickling down that somehow just remind one of a rainbow suddenly falling to pieces and dropping through the sea, when President Etta King Ogle's countenance suddenly illuminated.

"Just the very thing! Perfectly grand for automobilists!"

"Prithee tell us, please," implored the other nine.

And then the presidentess unfolded the plan that will make Utopia for the poor, lonesome automobilist who, like Eugene Sue's "Wandering Jew," have had to peregrinate around the country with no homes of their own. Some of them may have paused in out of the way corners like New York, Philadelphia, Boston, Chicago, or Barnegat, but other plebeians lived here too, such as horse drivers, steeple jacks, artists, tug boat captains, brokers, and others. But aintitawfulmabel that there hasn't been a place just for automobilists?

It will not be so long, for that memorable meeting in old Palmer some time ago marked an epoch in the history of automobiling that will go down in the annals—but anyhow, here jumps the cat right out of the bag. Sssssh! Don't tell any one just yet, for it may not happen, but the estimable ten ladies who form the Old Center Improvement Club, which built the automobilists' free rest room 1½ miles from Palmer, intend to build the "City Automobile."

The "City Automobile" will be situate in—quoting from the presidentess—"the old historic Center, a bit of country more lovely than any on earth. Bold and picturesque scenery—noble hills shouldering the sky—rich meadows interlaced with trout brooks. Just the spot for a lovely City Automobile . . . . . better than Lenox."

Don't think this is an advertising scheme. Far be it from the estimable ladies of the Old Center Improvement Club to foist a "scheme" on an unsuspecting public.

Not at all—"the thought was born from reading of the country persecution of the autoist (quoting Presidentess Etta King Ogle again) and it became crystalized, to plant a city of wealth and homes right here in this beauty-field, skirted with forests, fine heights . . . . no noise, no dust from the railroad," and in fact, lots of other things one column three inches running over into the next line long.

If it hadn't been for the fact that the lawyers' and business men's clubs around old Palmer were slow the women wouldn't have taken things into their own hands but, being imbued with the true Western spirit, as they say—

And that's the answer.

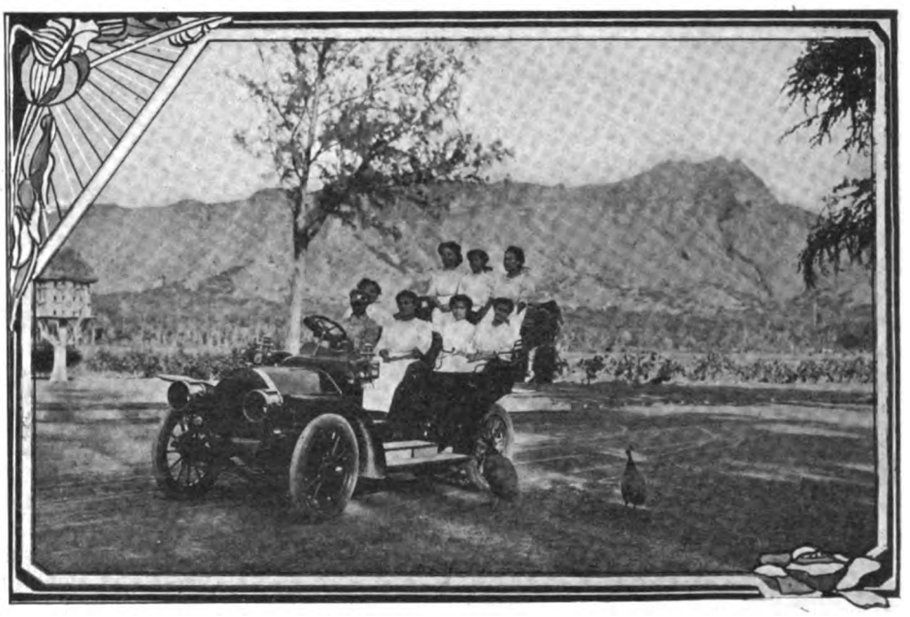
Boston Gets Its Taxi-Motor Cabs.

Taximeter motor cab service was inaugurated in Boston, beginning last week, when twenty-five vehicles built for the service by the E. R. Thomas Motor Co., of Buffalo, N. Y., were put in commission by the Taxi-Motor Cab Co. There was immediately a demand for them by the citizens of Beanopolis, who are obliged for the present to call a cab by telephoning to the company's headquarters in the Motor Mart. Regular stands will be established within a few days. The rates of fare, as fixed by the Police Commissioner, are similar to those established in New York City.

ON HAWAII'S BEAUTIFUL ROADS

Where Grandchildren of Savages Ride in the Most Modern of Vehicles—Attractiveness of the Islands.

While the automobile has become a more or less familiar sight in almost every part of the world, in many countries and places it still is somewhat of a curiosity. In many climes the impression exists amongst the semi-barbaric and barbaric inhabitants that the self propelled motor car is some sort of a "devil wagon"—and the natives employ this description of the vehicle with a far different meaning than does the Anglo-Saxon. To Glidden, and others like him, many hundreds of people are indebted for their first and only sight of an automobile, and while to these strange and almost unknown races the motor car still is, and for many years will be, an object of intense wonderment, it gradually is finding its way into more general use throughout the civilized world and to-day is unnoticed in countries where a very few years ago it would have been a marvel.



BEVY OF HAWAIIAN BEAUTIES JOY RIDING NEAR HONOLULU

One of the very attractive places for automobiling is the Hawaiian Islands, as is shown by the accompanying illustration, which depicts a Studebaker car on the roads near Honolulu. The condition of the roadway, the picturesque scenery, together with the long days and cool evenings of tropical countries supply conditions for motoring which readily account for the popularity which motor cars have achieved in this portion of the tropics within a comparatively short time. The presence of the most modern of vehicles on well kept roads through regions where cannibals dwelt little more than a century ago is a striking illustration of the progress of civilization.

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NEW RESTRICTIONS IN THE PARKS

Ordinance Adopted Bars Out Vehicles Emitting Smoke and Nauseous Vapors—Many Complaints Reported.

At a meeting of the New York City Park Commission, held Thursday last, 23d inst., a rule was adopted which aims to exclude from the use of the park highways of the city, automobiles that emit smoke and nauseous vapors. The ordinance reads: "No person shall be permitted to run a motor vehicle in the parks or parkways of this city, under the jurisdiction of the Department of Parks, which emits from the exhaust or muffler thereof offensive quantities of smoke or gas or disagreeable odors."

In discussing the new rule, Commissioner Smith said that he had received many complaints from drivers and others who use the parkways, to the effect that the smoke and odors from many machines made driving almost intolerable.

"The taxicab companies were most complained of as offenders," said the commissioner, "and I had the park police take the numbers of all machines that smoked. These I submitted to their owners, but the cars still smoked."

Incidentally, he mentioned the danger in driving behind automobiles from which heavy smoke or ill-smelling gases come, and remarked that a like measure had long been in force in other cities. The ordinance goes into effect on August 1, and Captain Farrell, in charge of the park police, was ordered to explain the new order to the park policemen and to instruct them what action to take.

Rock Island to Impose a Wheel Tax.

Chicago, in imposing a wheel tax upon all vehicles, and in securing a court decision in favor of the legality of that tax, has set an example that other Illinois cities might be expected to follow as a matter of course. Rock Island is the next to look with favor upon this new method of shaking down, the chief victims of which naturally would be automobile owners. The intended victims, however, are doing their best to prevent the city council from adopting the ordinance for the purpose which has been introduced. They have been trying to show the city fathers its unfairness.

Police Testimony Fails to Convict.

When the automobilist falls into the hands of the trap operating country cop, it is almost a cinch that the average cost per mile of his trip will be swollen by the addition of a fine, for the cop's word goes, as a rule. But there was a notable exception the other day when Charles N. Fitts, of Newton, Mass., was haled before Judge E. B. Pratt, in the district court of the town of Hingham and, without lawyer or witness, succeeded in convincing the court that the three policemen operating the trap could not have timed him correctly. After hearing the testimony of the policemen Mr. Fitts testified that he had a speedometer on his car and just as he entered Hingham he noticed the large sign that he never saw before asking the automobilists to keep the speed down to 15 miles an hour and he accordingly cut his speed down until he passed a sign giving eight miles as the limit. He testified that at no time until he was stopped did his speedometer show more than 11 or 12 miles an hour. He was promptly acquitted.

How Automobiles Aided the Runners.

Although the message which Mayor McClellan, of New York, sent to Mayor Busse, of Chicago, "by bearer," was carried the entire thousand miles of the way on foot, the irrepressible motor car played an important part in the accomplishment of at least one stage of its travels. From Syracuse to Auburn, N. Y., three trucks, loaned by the H. H. Franklin Mfg. Co., carried 44 of the relay runners, dropping them one at a time to relieve others who were picked up at three or four minute intervals. Needless to say the freshness of the reliefs, not to mention the cheering influence of having the whole team present to witness the efforts of each individual, went a long way toward making that portion of the enterprise a successful one.

Hartford Contracts for an Ambulance.

Having rejected all bids for supplying an automobile ambulance to the city of Hartford, Conn., the police commissioners —to whose department the city ambulance service is attached— have given the contract to the receivers for the Pope Mfg. Co., without the formality of public letting. The contract price for the ambulance is $3,750, the figure submitted by the receivers in the original bid, but which was not the lowest. The new ambulance is to be a Pope-Hartford of 30 horsepower, with a wheel base of 130 inches. The body will be of the approved modern type incorporating side doors and having cots for four persons, all of which are compactly housed when not in use.

Tipping Off Motorists Offends Police.

When Percy Hollsworth, of 206 West 140th street, Manhattan, was arrested for speeding on Bay street, Stapleton, Staten Island, on Saturday, 25th inst., the police got from him a card on which was printed, "Do not speed here; police in plain clothes are watching you and you will be arrested." Hollsworth said the card was handed to him by a man at the St. George ferry, and the entire force on Staten Island was put on the lookout for the man who thus dared to warn motorists against fracturing speed regulations. Hollsworth had to put his diamond ring in hock at the station house to insure his appearance in court.

OHIO'S NEW LAW TO BE TESTED

Cincinnati Automobile Club to Join in Friendly Litigation—Question of Double Taxation the Main Issue.

What appears like double taxation to the Ohio automobile owners is to be subjected to a thrashing out in court. The constitutionality of the new State law is to be tested in a suit to be managed by Harry Probasco, of Cincinnati, attorney for the Cincinnati Automobile Club. Neither Mr. Probasco nor the members of the club seriously object to the State registration fee, but they do object to the additional imposition of local license fees under city ordinances. Mr. Probasco does not have much faith that the State law will be held to be unconstitutional, but since the suit is to be a friendly one all the way through, he has decided to raise the question as to the validity of the State law, while attacking the legality of the Cincinnati ordinance.

Missouri Law Indifferently Obeyed.

Missouri automobile owners have not been prompt to observe the requirements of the law enacted in 1907, only 3,000 having registered their machines with the Secretary of State. Chauffeurs are even more backward in the matter. The number of automobiles registered is regarded as a very small percentage. Secretary of State John E. Swanger has got his dander up and notice has been given that both owners and chauffeurs will have to toe the line before August 1st or be prosecuted. The law requires that chauffeurs shall be registered and receive badges which they are required to wear, displayed as a policeman does his star. The machine owners are required to send to the Secretary of State at Jefferson City detailed information as to their automobiles. The registration fee is $5, and this money goes to a fund for the improvement of roads.

Indianapolis Enforcing Its Shakedown.

Indianapolis authorities are after those automobile owners who have failed to pay their license fees for 1907 under the city ordinance imposing a local fee. More than 100 warrants, sworn out in November, 1907, have been placed in the hands of Patrolman Kerins, who thus far has succeeded in placing 15 recalcitrant owners before Judge Whallom. Each of the victims of the law was mulcted in a fine of $1 and costs. When the warrants were issued in November last automobile owners contended that the State law was explicit in declaring that the State license fee was the only fee that should be charged, and that they should not be required to pay the city license fee. A test case was instituted, and the city won on the ground that the ordinance was a police regulation and not a revenue tax.

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The Week's Patents.

888,196. Igniter Mechanism for Internal Combustion Engines. Edwin Ruud, Pittsburg, Pa., and Conrad Regenbogen, Manchester, England, assignors to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed May 18, 1904. Serial No. 208,577.

1. In an internal combustion engine in combination with an inlet valve, a pivoted valve operating lever, a cam actuated rod for actuating said lever, a yielding connection between said rod and said lever whereby said rod is capable of further motion after said valve is closed, an igniter trip bar pivotally mounted on said rod, a stationary igniter terminal, a pivoted igniter terminal adapted to be moved into contact with said stationary terminal by said rod through the agency of said trip bar, an adjustable timing device for controlling the pivotal motion of said bar and releasing said movable terminal and means for forcing said movable terminal out of contact with said stationary terminal.

888,214. Tire for the Wheels of Road Vehicles. Jean V. F. A. Yberty and Emile B. Merigoux, Royat-les-Bains, France. Filed Aug. 9, 1906. Serial No. 329,907.

1. In combination, a wheel rim, tire support therefor of U shaped cross section provided with bolt holes, a tire composed of a plurality of distinct elastic units spaced apart from each other and provided with openings, tire bolts extending through said openings in said units and said support, said support being provided with slots, support bolts extending through said slots and between said units, wedge shaped blocks interposed between said units and forming therewith a continuous tread, block links loosely secured to said blocks and having slotted ends connected with said support bolts, and rim bolts connecting said support bolts with said rim.

888,225. Friction Gearing. James K. Cochran, Chicago, Ill. Filed Dec. 26, 1905. Serial No. 293,370.

1. In gearing of the character described, the combination with a shaft and a plurality of friction members thereon provided with a plurality of sets of friction faces, of a plurality of sets of adjustable friction wheels, one of said sets co-operating with each set of friction faces, and common actuating means for the various sets of friction wheels connected to the same for effecting their simultaneous adjustment.

888,226. Starter for Combustion Engines. Lembert C. Coppock, Marion, Ind., assignor to Coppock Motor Car Company, Marion Ind., a Corporation of Indiana. Filed April 4, 1907. Serial No. 366,366.

1. A plurality of combustion engine cylinders, means mounted in connection with each cylinder for starting the engine, a lever for controlling the starting mechanism for each cylinder, a rotary rod mounted in the means in which the levers for all of the cylinders are fulcrumed, eccentrics on said rods for actuating said levers, and means mounted on said rod for turning it by hand.

888,265. Power Transmission Mechanism. Norman Ruland, New York, N. Y.—Filed July 20, 1907. Serial No. 384,711.

1. In combination, two oppositely disposed rotatable discs, a friction wheel intermediate said discs and in engagement with the surface of each and movable along said surfaces to vary the relative speeds of rotation of said discs and said wheel, and means for applying fluid pressure to both of said discs to hold them in engagement with said wheel with equal pressure and to eliminate side thrust upon the wheel.

888,269. Cushion Tire for Road Vehicle Wheels. James Stevens, London, England. Filed March 26, 1906. Serial No. 307,963.

1. A protecting cover for resilient tires of wheels of road vehicles comprising an endless flexible band around the periphery of said resilient tire, a series of concavities in the periphery of the resilient tire, insertion pieces fitting in said concavities and located between said band and the resilient tire all round the latter to prevent creep, a series of protecting shoes of channel shape in cross section, and means to secure said shoes to the said band and insertion pieces —to thereby hold said shoes spaced apart in position over the said resilient tire and a band of flexible material such as leather or canvas located between the said insertion pieces and said resilient tire substantially as described.

888,282. Explosive Engine. Henry O. Westendarp, Saugus, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 4, 1903. Serial No. 179,771.

1. In an explosive engine, the combination with an explosion cylinder provided with exhaust and admission ports, and a power piston in the cylinder covering and uncovering said ports, of means for injecting a scavenging charge at substantially atmospheric pressure into the cylinder, through certain of the admission ports and means for injecting a charge of fuel into the cylinder through other admission ports substantially in continuity with the scavenging charge and at a definite point in the compression stroke of the piston after closure of the exhaust ports.

888,302. Wheel Tire. Frank N. Boughn, Riverside, Cal. Filed Oct. 29, 1907. Serial No. 399,660.

A vehicle wheel having a rim provided with a flattened tread surface and provided at one side of said surface with an integral annular flange, the said tread surface being formed at intervals with transverse grooves, a metallic tire having a flattened base resting against said flattened tread surface, said tire being engaged at one side of said flange, transverse ribs upon the flattened surface of the tire engaging the grooves in the rim, and a removable retaining flange at the opposite side of the rim engaging the opposite side of the tire and engaging and holding said ribs seated in the grooves.

888,345. Pneumatic Tire. Harry Musclow and William A. Roberts, Vancouver, British Columbia, Canada. Filed July 23, 1907. Serial No. 385,109.

1. As an inner tube for a pneumatic tire, the combination with an inflatable tube ring of flexible elastic air tight material, of a denticulated ring cemented round the tread of the tube on the inside and a corresponding denticulated ring on the diametrically opposite side of the tube the denticulations of the two rings interprojecting and the conformation of the inner cemented rings and the sides of the dentriculations approximating to the inner conformation of the tube before inflation.

888,347. Vehicle Spring. Michael M. McIntyre, Cleveland, Ohio, assignor to The Perfection Spring Company, Cleveland,

Studebaker

RECORD FOR JUNE

Perfect Score In the 24 hour endurance contest at San Leandro, Cal., under the auspices of the Frisco Automobile Club, a Studebaker "30" Model H stock car finished with a perfect score, and was the only contestant to run the entire 24 hours without stopping its motor.

Perfect Score In the Wilmington, Delaware, Sealed Bonnet Contest, held June 27th, a Studebaker "30" entered, finished with a perfect score.

Perfect Score In the Stroudsburg, Pennsylvania, Endurance Run, June 27th, the Studebaker "30" finished with a perfect score.

Studebaker Wins In the Hundred Mile Road Race at Portland, Oregon, June 4th, over a 14.5 mile course, the two Studebaker cars entered won first and second place in competition with ten other cars. The winning Studebaker covered the 100 miles in 2 hrs. 4 min. 8 sec.

Studebaker Wins June 27th, in the Hill Climb at Delaware Water Gap, Pennsylvania, the Studebaker made the mile climb in 2 min. and 2 sec., winning the event.

Complete map of Glidden Tour just out. Write for it to-day.

Studebaker Automobile Co.

General Office, CLEVELAND, OHIO. Main Factory at SOUTH BEND, IND.

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Ohio, a Corporation of Ohio. Filed June 2, 1906. Serial No. 319,814.

1. The combination, with the hangers or outriders of a vehicle, of an upper and a lower spring member clamped together to form a unitary structure, links or shackles extending upwardly from said hangers or outriders and connected to the ends of the upper spring member, and links or shackles extending downwardly from said hangers or outriders, the lower spring member terminating in scrolls, the ends of which are connected to the last mentioned links or shackles, substantially as specified.

887,691. Electrically Driven Vehicle. William B. Potter, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 25, 1903. Serial No. 163,088.

1. The combination with a trolley pole, of a universal joint cross swiveled thereto, a contact shoe lingitudinally pivoted on said cross, and means for yieldingly holding said shoe at an oblique angle to said pole and in a definite swiveled relation thereto.

887,701. Steering Gear. Charles J. Schoening, Honolulu, Hawaii, assignor of one-third to George P. Cooke, Honolulu, Hawaii. Filed May 4, 1907. Serial No. 371,773.

1. A steering gear for motor vehicles provided with a steering column made in sections telescoping one in the other, means in connection with the sections for preventing rotary movement thereof with respect to each other and a locking device for locking the sections in the adjusted position.

887,781. Transmission Device. Anton P. Fischer, Pittsburg, Pa. Filed Oct. 24, 1907. Serial No. 398,878.

1. A transmission device of the class described, comprehending a rotative cylinder of elliptic form in cross section, provided with oppositely disposed by passes communicating with the interior thereof and having an exterior annular extension about its axis of rotation, oscillatable valves in said by-passes, a sleeve carried by said extension and adapted to slide longitudinally thereon, means associated with said valves and sleeve whereby a sliding movement imparted manually to said sleeve will oscillate the valves, a rotative piston in said cylinder provided with oppositely disposed radial slots, spring actuated blades in said piston slots adapted to engage the walls of the cylinder, and a liquid filling the unoccupied space in said cylinder and by-passes.

887,824. Automobile Gearing. Lester V. Lochner, Auburn, Ind. Filed Oct. 14, 1907. Serial No. 397,383.

A gearing of the class described, comprising a drive shaft, a driven shaft geared thereto, the driven shaft having yokes secured at its outer ends, the yokes comprising vertically extending portions and outwardly and horizontally extending portions at the upper and lower ends thereof, the driven shaft having hemispherical gears at the outer ends, the teeth of the gears being arranged in circumferential rows upon the hemispherical faces, the teeth of the alternate rows being arranged between the teeth of the opposite rows, a second yoke mounted for angular movement with respect to the first yoke, the yoke having a shaft, a hemispherical gear carried by the shaft and arranged to mesh with the first named gear, and a steering apparatus connected with the last named yokes.

887,888. Carriage Cushioning Device. Melanie Wolf, New York, N. Y. Filed May 18, 1907. Serial No. 374,373.

1. In a motor vehicle, the combination with a motor, of a cushioning device comprising compressed air cylinders, spring plates secured to the axles of the vehicle and supporting said air cylinders, spring actuated pistons working in said air cylinders, and universal joints connecting the piston rods with the underframe of the vehicle, a compressed air receptacle communicating with the said air cylinders, an air pump supplying compressed air to said receptacle, a crank shaft to be operated from the motor and driving the air pump, and means to at a certain pressure automatically disconnect the air pump from the motor, substantially as set forth.

887,925. Shock Absorber. David M. Davis, Washington, D. C. Filed June 1, 1907. Serial No. 376,869.

1. A shock absorber comprising a cylinder having communication with the atmosphere, a piston in said cylinder, receivers, fluid passages from the cylinder to the receivers, return fluid passages from the receivers to the cylinder, non-return check valves for the first-mentioned passages, and regulating valves for the return passages.

887,961. Friction Transmission Mechanism. Byron G. Pfeiffer, Detroit, Mich. Filed July 11, 1907. Serial No. 383,165.

1. Transmission mechanism comprising a main shaft, a follower shaft in axial alignment therewith, a friction clutch adapted to directly couple the shafts, a conical friction drum on the follower shaft concentric with the main shaft, a friction cone reduction train adapted to operatively connect the exterior face of the drum with the main shaft, a reversing friction cone train adapted to operatively connect the interior face of the



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drum with the main shaft, and means to throw said trains into gear.

887,988. Deodorizer for Internal Combustion Engines. William R. C. Wakley and Robert Parsons, London, England. Filed Dec. 14, 1907. Serial No. 406,558.

1. In a deodorizer for the exhaust gases of an internal combustion engine, the combination of a casing, a perforated water receptacle connected to a water circulating system, an inlet and an outlet for the exhaust gases so arranged that the said gases pass through the jets of water, a sump to receive the water, a filter, and a pipe connecting the sump with the said water circulating system.

888,074. Means for Starting Internal Combustion Engines. Giovanni Enrico, Turin, Italy, assignor to F. I. A. T. Fabbrica Italiana Automobile Torino, Turin, Italy. Filed Oct. 3, 1906. Serial No. 337,292.

1. In an internal combustion engine, the combination with the cylinder of inlet and outlet valves, cams for operating such valves, a hollow cam shaft carrying such cams, an additional valve adapted to admit compressed fluid to the engine for starting purposes, a cam for operating said additional valve, said cam being independent of the outlet and inlet valve cams, and being adapted to slide on said cam shaft, and a second shaft for operating the cam for the additional valve, said shaft extending within the cam shaft and being connected to its cam throcgh slots formed in the cam shaft.

888,195. Timer. Walter W. Robinson, West New York, N. J., assignor to Witherbee Igniter Company, a Corporation of New Jersey. Filed Aug. 24, 1907. Serial No. 389,973.

1. In a timer of the character herein specified, the combination with a hollow casing, contacts carried thereby, and a rotatable member located therein, of a spring-actuated roller carried by said member, and a loose ring having smooth inner and outer faces located between the roller and the wall of the hollow casing.

887,279. Odometer Mounting and Lock for Vehicles. Andrew J. Smith, Los Angeles, Cal. Filed June 10, 1907. Serial No. 378,111.

In a device of the class described, a revoluble vehicle wheel mounted on a stationary axle; an odometer having a stationary and a revoluble member, said stationary member being rigidly mounted on said axle and said revoluble member being rotatively secured to the hub of said wheel; a cylindrical casing for said odometer bolted to the hub of said wheel, the heads of the bolts projecting inside of said casing; and a screw cap for said casing adapted to be locked thereon.

887,295. Automobile Tire. Wilhelm Weidling, Magdeburg, Germany. Filed April 29, 1907. Serial No. 370,862.

An automobile tire having a cover of leather, a strip of leather around the outer circumference thereof, clip like holders on the same at regular intervals, metal blocks in said holders other metal blocks laid between the holders, both kinds of metal blocks provided with grooves forming together continuous grooves running around the circumference, flexible endless bands in said grooves all as described and for the purpose set forth.

887,356. Ball Bearing. Jackson L. Straub, Lancaster, Pa., assignor of one-half to Ernst Sachs, Schweinfurt-on-the-Main, Germany. Filed Nov. 14, 1906. Serial No. 343,414.

1. In a ball bearing, concentric bearing members having confronting grooves or ball races, an annular series of balls running therein, and a ball spaces or separator consisting of an undulated ring of sheet metal passing in and out between adjacent balls throughout the series and having the balls seated alternately in the pockets of the two sides of the ring formed by the concavities of the undulations themselves.

887,370. Carburetter. Alexander Winton and Harold B. Anderson, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed June 23, 1906. Serial No. 323,117.

1. A carburetter, comprising means for maintaining a fluid level, an air passage having its lower wall projecting into said level to form a fluid holder, said wall provided with a fluid orifice in a plane below said fluid level, the orifice so restricted as to require spray action from said orifice within the air passage for increasing fluid supply to the increased volume of air passing therethrough.

887,413. Speed and Power Controlling Mechanism. Louis J. Monahan, Oshkosh, Wis., assignor of one-third to J. D. Termaat and one-third to M. L. Cottrill, Oshkock, Wis. Filed June 12, 1905. Serial No. 264,972.

1. In power transmitting mechanism, the combination of a rotatable power transmitting shaft, variable speed transmitting mechanisms loosely mounted on said shaft, clutch mechanisms rotatable with the shaft but slidable thereon, levers for effecting the engagement of the clutches with the respective variable speed transmitting mechanisms, cylinders arranged in suitable position with relation to the levers, and pistons connected to the levers and operated by an actuating medium admitted to and exhausted from the cylinders and adapted, when the piston of any cylinder is moved in one direction by the actuating medium, to cause the lever relating thereto to operate its clutch to effect a clutching engagement with its associated transmitting mechanism, and means, when the actuating medium is exhausted from the cylinder, to cause the lever

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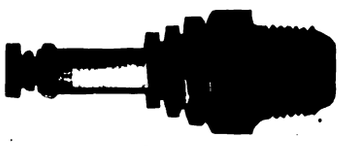
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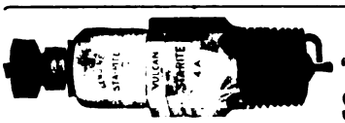
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and consequently the piston to return to normal position.

887,505. Air Cushion and Air Compressor for Automobiles and Other Vehicles. Wesley H. Nelson and Lee W. Galloway, Norwood, Colo. Filed May 27, 1907. Serial No. 375,950.

1. A vehicle having an air compressing apparatus comprising a plurality of double acting air pumps mounted upon the wheel axle and having the rods of their pistons connected to the bottom of the vehicle, and air reservoir fixed to said vehicle bottom, an arrangement of pipes having communication with the cylinders of said pumps opening above and below the pistons of said pumps, and means delivering air pressure from said arrangement of pipes to said air reservoir.

887,551. Vehicle Brake. Herbert M. Vanderbilt, Suffern, N. Y. Filed Aug. 1, 1906. Serial No. 328,753.

1. In a vehicle brake, clamping means adapted to engage the wheel of the vehicle when thrown in contact therewith, means attached to said clamping means designed to be drawn under the wheel when said clamping means and wheel are engaged, means for automatically returning said clamping means and the means attached thereto to an elevated position when the wheel is backed off of said last named means, and means then operating to automatically withdraw all of said means from the wheel.

887,562. Vehicle Wheel. Martin L. Williams, South Bend, Ind. Filed Dec. 26, 1905. Serial No. 293,291.

1. The combination with a vehicle axle and a terminal yoke upon the latter, of a spindle member pivotally connected with said yoke to oscillate upon an axis substantially perpendicular to the longitudinal axis of the axle, a wheel journaled upon said spindle member and a guard mounted to move with said spindle member during the oscillatorv movement of the latter and overlapping the contiguous portion of said yoke which supports the spindle member, the overlapping portion of said yoke guard being internally spherical and the exterior of the overlapped portion of the yoke of corresponding shape.

887,567. Flexible Metallic Vehicle Wheel. Gustav Auberlin, U. S. Navy. Filed April 4, 1907. Serial No. 366,292.

1. A vehicle wheel comprising a hub, yielding spokes, and a rim composed of an inner and outer series of flexible cables and means for spacing them apart.

887,633. Internal Combustion Engine. Samuel H. Heginbottom, Frank H. Heginbottom, and Walter G. Heginbottom, Saginaw, Mich. Filed Dec. 2, 1907. Serial No. 404,667.

1. The combination with a cylinder having an inlet port and a piston adapted to open and close said port, of means for adjusting the cylinder and piston, one relative to the other to vary the amount of charge admitted to the cylinder through the inlet port.

887,684. Vehicle Wheel Tire. Henry H. Moore, Paris, France. Filed Sept. 22, 1906. Serial No. 335,732.

1. An elastic tire for vehicle wheels comprising, in combination with a felly; metallic sections inserted one in the other all around the felly; means for preventing the sections from falling out of said felly and springs, each working conjointly on two sections at a time and tending to elastically force the sections outwardly to the periphery of the felly, substantially as and for the purposes described.

887,179. Wind Shield. Charles F. Brandt and Walter R. Johnston, Columbus, Ohio. Filed April 26, 1907. Serial No. 370,510.

A wind shield comprising a lower sash, bracing means supporting the same, a channel secured at each side of said sash and being of greater width than the thickness of said sash, a channel member hinged upon the said channel, an upwardly extending flange formed along the upper edge of said sash, a second sash adapted to be positioned upon said first sash and having its lower side in engagement with said flange and its ends positioned in said hinged channel, a set screw mounted in said hinged channel member and adapted to force said second sash into secure engagement with a wall of said hinged channel member, said second sash being adapted to be moved laterally in said channel and lowered in said channel to the side of the first sash, said hinged channel member being adapted thereupon to be folded laterally to embrace the upper edges of said sashes, said set screw being adapted to be inserted at the same point of said hinged channel member to force said sashes into secure engagement.

887,180. Controller. Charles O. Barnes, Oswego, N. Y., assignor to Barnes Gear Company, Oswego, N. Y. Filed March 23, 1907. Serial No. 364,178.

1. The combination with a tubular support, controller rods mounted therein and a head secured to said support, of operating levers secured to the respective controller rods, and friction devices located between said levers and the head.

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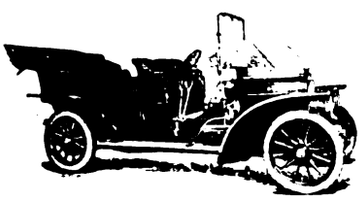
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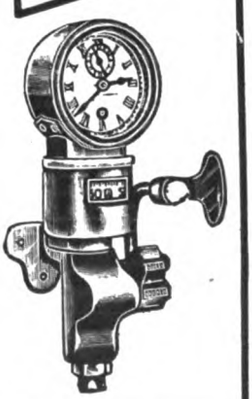
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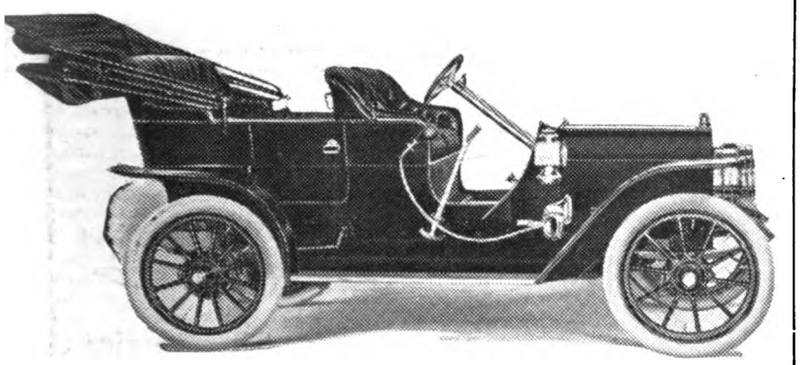
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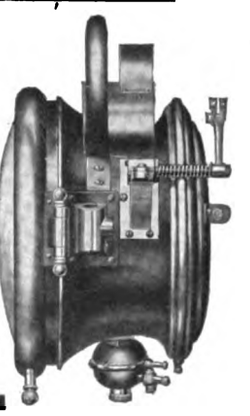
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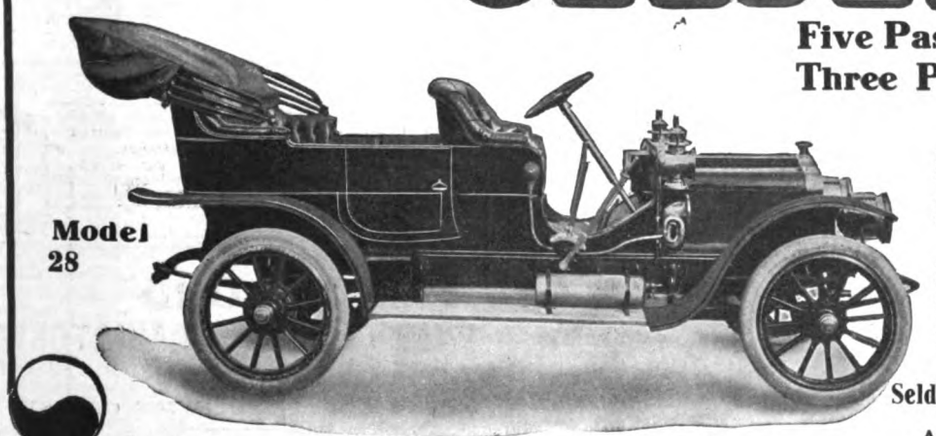
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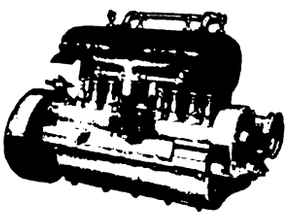
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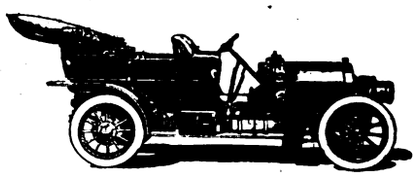
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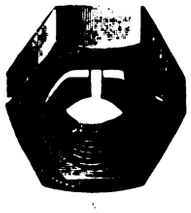
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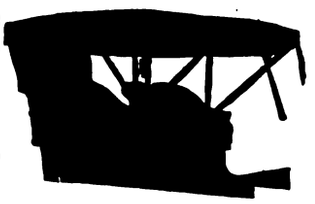
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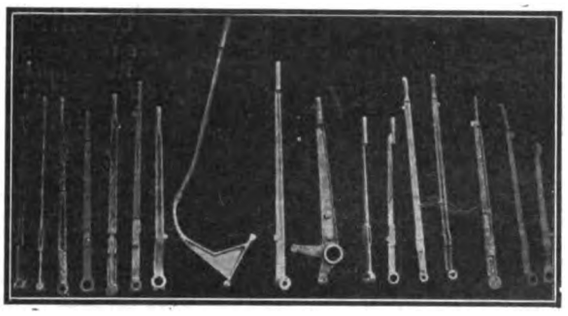
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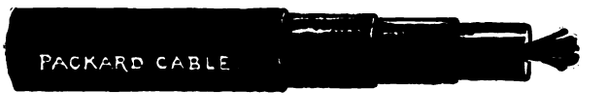


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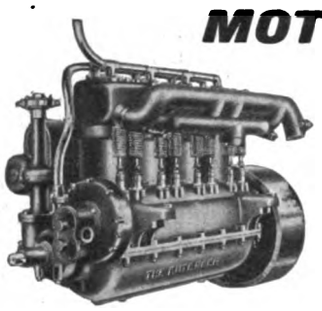
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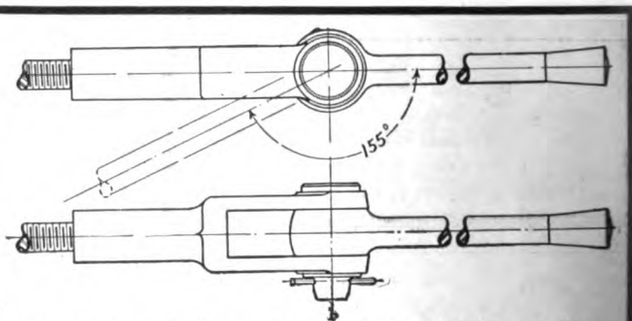
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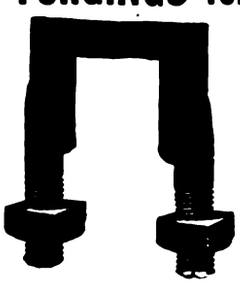
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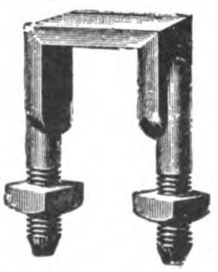
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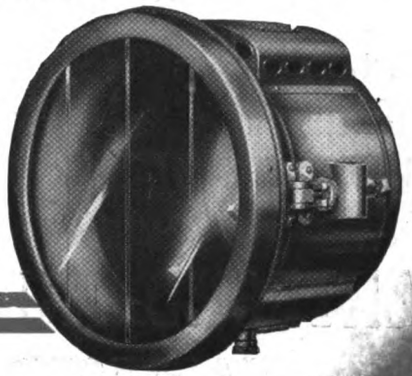
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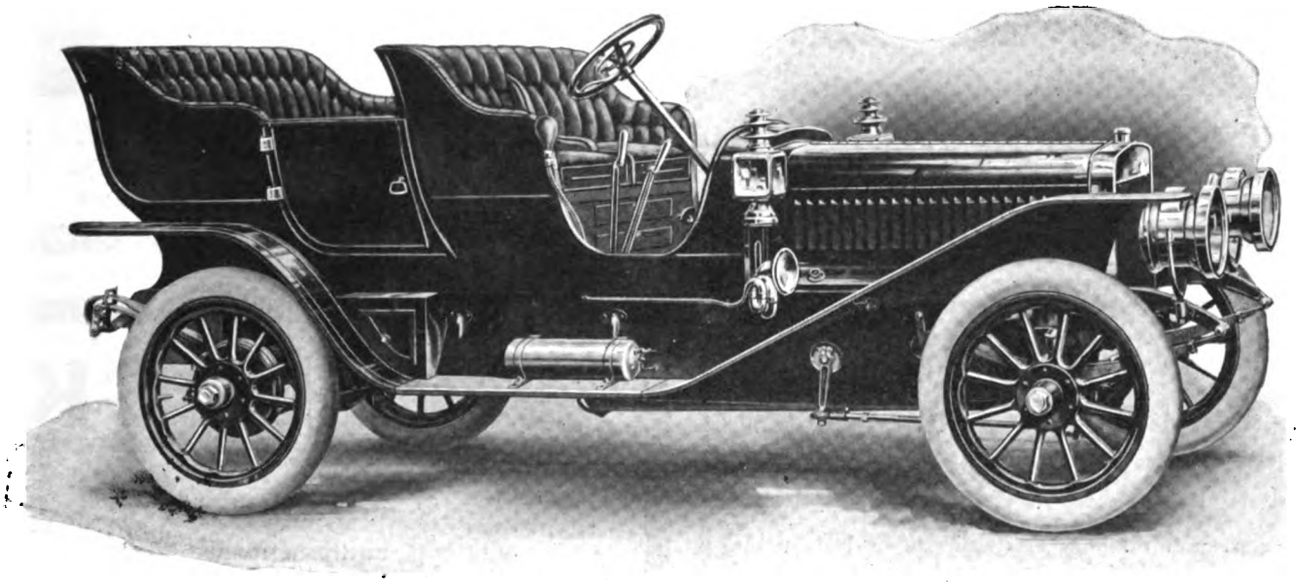
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Ten Winton Sixes Ran 65,687.4 Miles at an Upkeep Cost of $1.00 For Each 4,343 Miles



WINTON SIX

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Ten Winton Sixes ran 65,687.4 miles in six months (up to June 30, 1908), and cost for upkeep all told $15.12½.

That's 25 cents per month per car.

Or $1.00 upkeep for each 4,343 miles.

These figures are proved by the sworn reports of the ten individual owners of these cars. Glad to send you their affidavits if you like.

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Winton Six owners think so, because they pay the bills. So we are making the same exceptional car another year.

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And the same self-starter. A starter that starts. Take your seat, press a button, and the motor runs.

The Winton Six carries its starting crank in the tool box, because it isn't needed elsewhere.

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Then ride in the Winton Six. That's convincing. Quietest motor you ever saw. Sweeter than electricity, flexible as steam, and wonderful on hills. Makes hitherto bothersome grades ashamed of themselves. Cuts down gear changing, because it goes through traffic and up the hills on high gear. Saves gasoline, wear and tear, tires, and patience.

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And you haven't even the excuse of higher first cost to deny yourself the best there is in automobiles; because the Winton Six sells at $3,000, and represents a saving on first cost and on after-cost (upkeep)—a substantial saving that no business man, however wealthy, can afford to disregard.

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$3000 is the price of the 48.6 h. p. Winton Six, the 4,343-Miles-on-$1-upkeep car. For buyers who want more power, we are making a 60 h. p. Winton Six, with 7-passenger body and four-speed transmission. This car will be ready for early fall delivery and will sell at **$4500**

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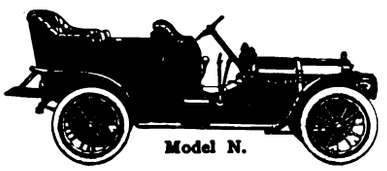
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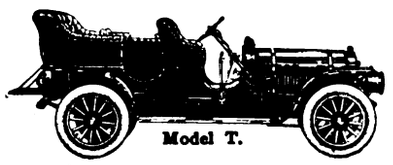
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¶ Mayo Radiators are made in a quality shop. In their construction no expense is spared, no crude methods obtain. In their use complete satisfaction results.

¶ Mayo Radiators perform their functions well under all conditions—and conditions at times are exacting. It is at just such times that Mayo quality asserts itself.

¶ The engineer can eliminate possible radiator troubles from his calculations by the adoption of the best possible radiator. The test of years and use has proved that we make it.

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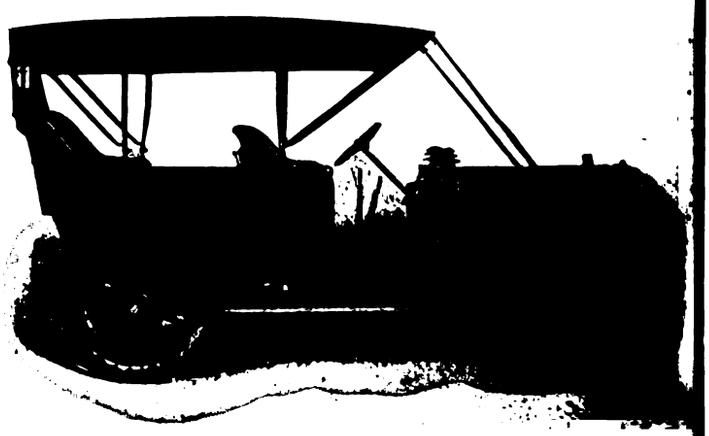
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THE "NON-SKIDDING" CAR



Compare following specifications with other cars at $3,000.

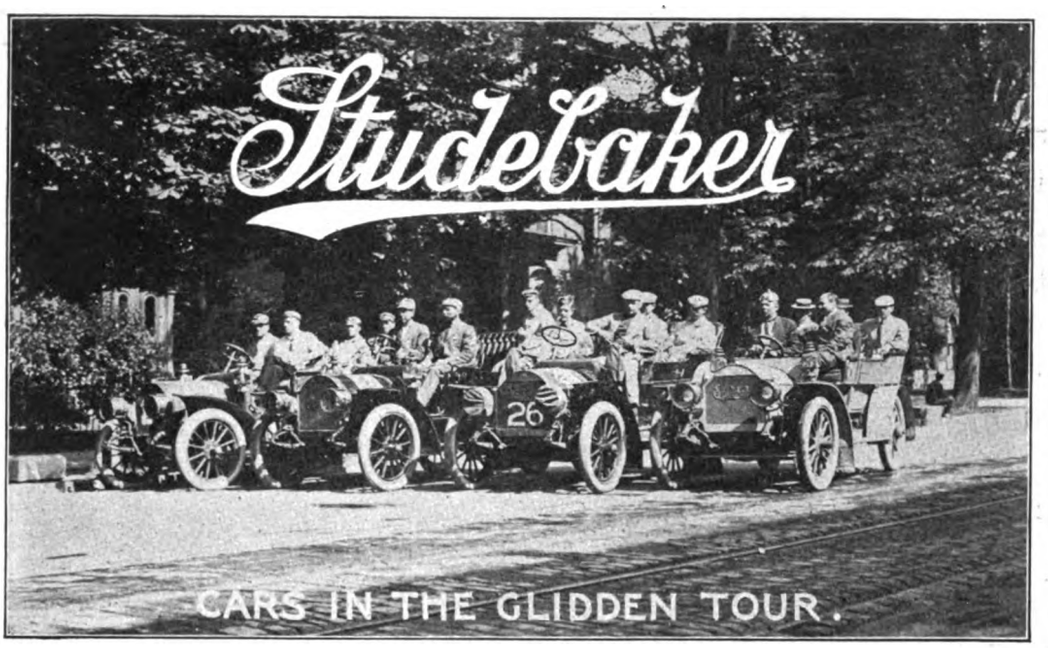
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Write for catalogue. Good proposition for dealers.

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Studebaker cars in the Glidden tour received more favorable comment than any other contestant. Did you read the story of their performance in the daily press?

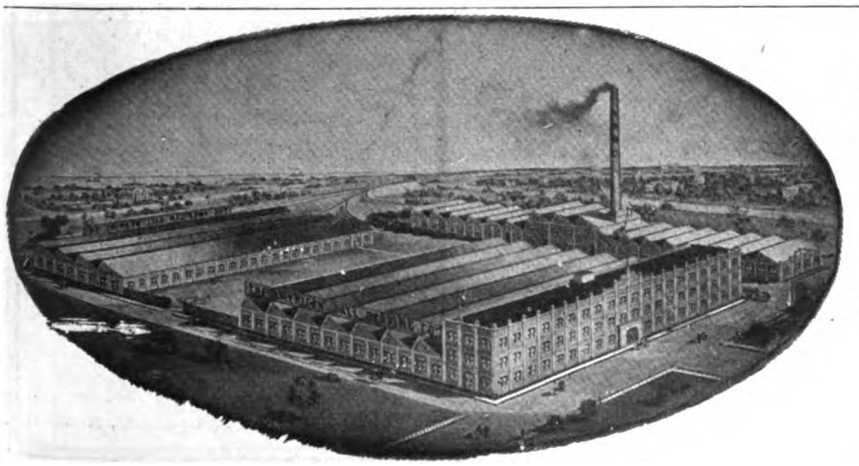
Each successive endurance event simply serves to demonstrate more forcibly than before the extraordinary endurance of these sturdy cars.

Studebaker Automobile Company

General Office, Cleveland, Ohio. Factory at South Bend, Ind.

BRANCHES:

BOSTON, MASS.—Studebaker Bros. Co. of New York, 1020 Boylston St. (Sub Branch).
CHICAGO, ILL.—Studebaker Bros Mfg. Co., 378-388 Wabash Ave.
DALLAS, TEX.—Studebaker Bros. Mfg. Co., 317-319 Elm St.
DENVER, COL.—Studebaker Automobile Co., 1536 Broadway.
KANSAS CITY, MO.—Studebaker Bros. Mfg. Co., 13th and Hickory Sts.
NEW YORK CITY—Studebaker Bros. Co. of New York, Broadway and 48th St.
PHILADELPHIA, PA.—Studebaker Bros. Co. of New York, 330 North Broad St. (Sub Branch)
PORTLAND, ORE.—Studebaker Bros. Co. Northwest, 330-336 East Morrison St.
SALT LAKE CITY, UTAH—Studebaker Bros. Co. of Utah, 157 State St.
SAN FRANCISCO, CAL.—Studebaker Bros. Co. of California, Mission and Fremont Sts.
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SELLING AGENCY—Lord Motor Car Co., 1251 Main St., Los Angeles, Cal.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park

CLEVELAND, OHIO, U.S.A.

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AJAX WRAPPED TREAD TIRES

After all is said
and done,
no matter how
glowing
the promises of
tire makers,
the only thing you have
to tie to
is
the word
of the dealer who
sells you.

If the tire
goes bad
you have the privilege
of carrying on
one end
of a controversy
with the factory—
that's all.

The tire maker
makes good—or doesn't
as he sees fit.

There's one exception—
AJAX—

Every AJAX tire
is guaranteed
for 5000 miles.

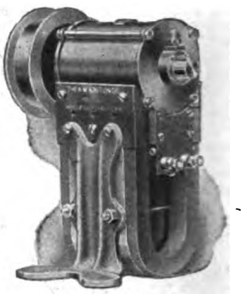
Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.
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Denver, 1529 Cleveland Place
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Agents in all large cities.

THE K-W MAGNETO

Model F

Has bracket as shown for attaching to frame of car. Made especially



For Ford Runabouts

Good on any car.

High in Quality—Low in Cost
Perfectly Reliable—Easy to Apply
More Power—Less Fuel

Price $35.00

It starts the engine easily without batteries and runs it faster and better than any battery because it gives a hotter spark. They run in ball bearings and have no moving wires or brushes to give trouble and wear out. They are made to last and they do last. They are the cheapest that is good and there is nothing better at any price.

We also make high grade Coils and Plugs and the K-W Master Vibrator. Get our catalogue.

THE K-W IGNITION COMPANY
38 Power Avenue, CLEVELAND, OHIO

REPRESENTATIVES:
A. H. GREEN & CO., 1686 Broadway, New York.
W. J. FORBES, 220 Congress St., Boston, Mass.

The Invincible Schacht Auto Runabout



MODEL K

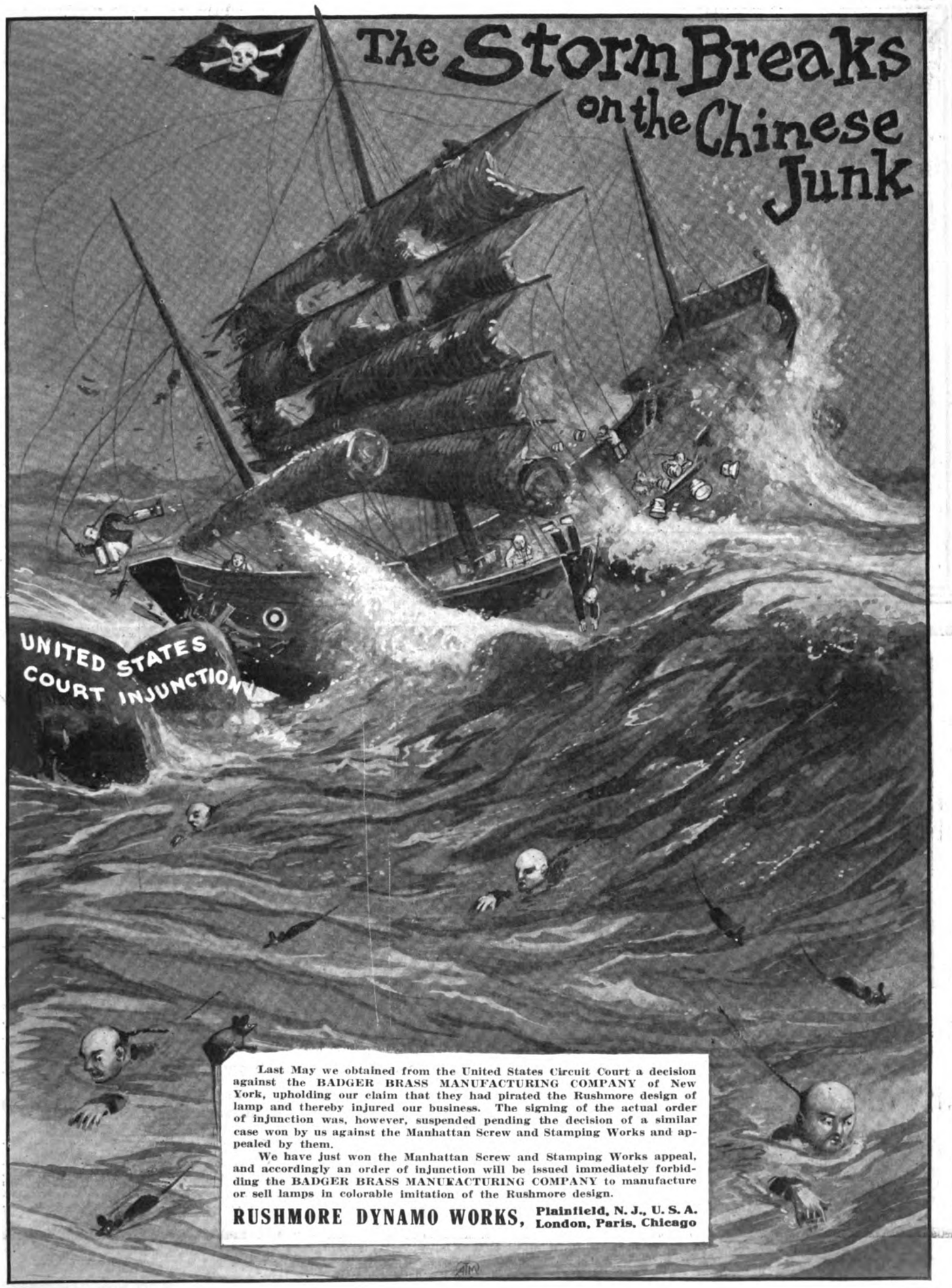
16 H. P. Friction Drive. Gearless and Clutchless. Roller Bearings Throughout. High Rubber-Tired Wheels. Long Concord Springs. The simplest, most practical, efficient and economical car ever built. Recognizes no hills or bad roads and will go anywhere that wheels will travel. **Most Popular and "Talked-of" car since the advent of the automobile. Write to-day for catalogue and agency proposition.**

Address M. HARRIS, Sales Manager,

THE SCHACHT MFG. CO., Cincinnati, O.

IOWA DISTRIBUTORS—Campbell & Earl, Fairfield, Ia.
NEBRASKA DISTRIBUTORS—Central Impt. Co., Omaha, Neb.

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DOW TUBES Are the Most Economical

(The Best Tubes Ever Manufactured)

The Faithful Record Given Below by C. C. Scrivener, Driver for Oakleigh Thorne, Esq., of New York, Shows that ONE DOW TUBE SAVED $127.49 IN 4½ MONTHS.

Dow Tire Co., 2000 Broadway, New York City. July 22, 1908.

Gentlemen—Having had up to date such fine service out of your "Dow" tubes on the Packard Runabout, I consider it only fair to tell you and the public how good they really are. One year ago, on July 17, 1907, I put in four of your tubes.

On October 5, 1907, the right rear tube, owing to a defective valve, had to be removed. The left rear was not removed until a few days ago on account of a bad blowout, the right front a few days later blew out, both owing, I believe, to old shoes. The left front is still doing service and is as good as ever.

Now comparing the rear shoes and tubes. After removing the right one on October 5, 1907, I did not put in a "Dow," but took it as a good chance to compare plain tubes with the "Dow." In this shoe I used in four months and two weeks eight tubes and three shoes against one "Dow" tube in two shoes.

As soon as our plain tubes in the other two cars are used up I intend to put in "Dow" tubes all around; their showing on the runabout under all conditions of roads, heat and cold, is entirely satisfactory. As to ordinary punctures, I don't know what they are any more. Nothing but a bad blowout will finish a "Dow" tube. Even a four-inch cut has not caused me any trouble on the road. I rode a shoe with such a cut containing a "Dow" tube for three weeks, then changed shoes just because it was the right thing to do.

I will cheerfully tell any one who wishes to know all I know about your tube.

Trusting you have many others as pleased as I am, I remain,

Respectfully yours,
C. C. SCRIVENER, Driver for Oakleigh Thorne, Esq., New York.

ONE YEAR'S CONSTANT SERVICE IN THE BOSTON FIRE DEPARTMENT.

Headquarters Fire Department, City of Boston, Bristol Street,

Dow Tire Co., New York, N. Y. Boston, July 20, 1908.

Gentlemen—Having used the Dow Non-Deflation Tubes since August 19, 1907, on the automobile used by Chief Mullen of this city fire department in his response to alarms of fire, I feel that, in return for the excellent results received from these tubes, I ought to inform you of same. Several persons have inquired of me as to their merits, and I have always spoken in the highest terms of them, but never felt that I could write you confirming my statements until such time as they had been in use for about a year.

We have given them all kinds of tests, and will truthfully say that they have withstood all punctures, and with the exception of "blow-outs," which are liable to occur with any type of inner tube, they have given excellent satisfaction.

Trusting this letter may be of benefit to you, I remain,

Yours very truly,
(Signed) JOSEPH A. WEBBER, Lieut., Aide to Chief.

ALL LIVE DEALERS SELL DOW NON-DEFLATION TUBES

Dow Tire Company, 2000 Broadway, New York
889 Boylston Street, Boston. 506-8 N. Broad Street, Philadelphia.



"Off Again—On Again—Gone Again"
IN LESS THAN A MINUTE

STEPNEY
Spare Motor Wheel

The only cure for tire troubles. Get one and be up-to-date. There is only one genuine spare wheel—"The Stepney." (Beware of imitations.)

DESCRIPTION—The Stepney Spare Motor Wheel is a device the adoption of which will serve to obviate the tire troubles experienced in motoring. It is simply a standard clincher steel rim, without hub or spokes, having four clamps (two stationary and two adjustable) for securing it to the rim of the injured wheel. The Stepney is intended for your Spare Tire to be carried upon it fully inflated and ready for use. Any standard clincher tire can be used.

Write for Catalog B, explaining and illustrating the Stepney Spare Wheel in each and every detail. A postal card will do.

SPARE MOTOR WHEEL OF AMERICA, Ltd., Main Office: 236 Michigan Ave. **Chicago**

OUR AGENTS IN THE DIFFERENT CITIES:

American Stepney Spare Wheel Co....341 Fifth Avenue, New York, N. Y.
Spare Motor Wheel of Cleveland.....1032 Euclid Ave., Cleveland, Ohio.
T. H. Walker & Co.....239 Jefferson Ave., Detroit, Mich.
T. E. Burnside.....140 E. Spring St., Columbus, Ohio.
Coughlin & Davis.....8th & Walnut Sts., Cincinnati, Ohio.
Fisher Auto Co.....330 No. Illinois St., Indianapolis, Ind.
Kentucky Automobile Co.....1049 Third Ave., Louisville, Ky.
Neustadt Auto & Supply Co.....3948 Olive St., St. Louis, Mo.
Becker Manufacturers' Agency, State of Wisconsin.....Iron Block, Milwaukee, Wis.
Wm. H. Bartlett.....1528 Broadway, Denver, Colo.
Consolidated Wagon & Machine Co.....Salt Lake City, Utah
Phoenix Rubber Co.....San Francisco, Cal.
Rollin Van Houton.....Los Angeles, Cal.
Pence Automobile Co.....Minneapolis, Minn.

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The Mitchell

The car you can afford to buy and KEEP

$2000

The Mitchell appeals **to you,** Mr. Business Man, because it gives you just as much **pleasure**—just as much and as **good service,** is just as **stylish** and neatly **finished** as any car, and doesn't cost you a small fortune to **buy**—or **keep.**

The Mitchell at $2,000 is the standard automobile value.

Prove it—Mr. Business Man.

Get **demonstrations** of the extravagantly high-priced cars—and then try the **Mitchell** over the **same** route.

The Mitchell agent will be glad to take you out if you're interested for 50 or 100 miles any time you say. Call him up (it places you under no obligation)—**Challenge** him—

Just say, "Show Me."

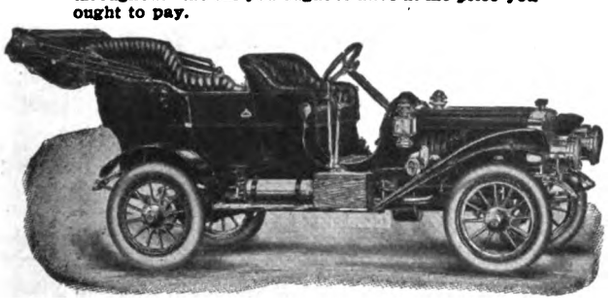
He'll come around with a car and show you a "silent argument" that will get your order or he will retire without a word.

Our catalog No. 18 is fully descriptive of the Mitchell 1908 Touring Car $2,000—Limousine $2,800—Roadster $1,250, and Runabout $1,000. Write for it—we'll also send letters from users, proving the Mitchell to be the most economical car to **operate.**

Mitchell Motor Car Co., 285 Mitchell Street, Racine, Wis.

Standard Manufacturers, A. M. C. M. A.

This car—shown here—35 h. p., 4 cyl., speed 50 miles, finished in Mitchell blue—price $2000—is excellent throughout—the car you ought to have at the price you ought to pay.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Write for White Bulletin No. 15

The above illustration is reproduced from the new White Bulletin No. 15, an attractive little booklet devoted to some of the more important automobile events of the last few months. The leading articles are "The New Road Record Between San Francisco and Los Angeles," "The Fort George Hill Climb," "The Quaker City Reliability Contest" and "The Harrisburg Reliability Contest." In addition to these four detailed accounts of White victories, brief space is given to the numerous minor contests in which the White has carried off first honors; also, the activities of private owners of White cars and the doings of "Government White Steamers" in this and other countries receive attention. We believe that you will find this booklet of interest.

A POSTAL TO US BRINGS A COPY

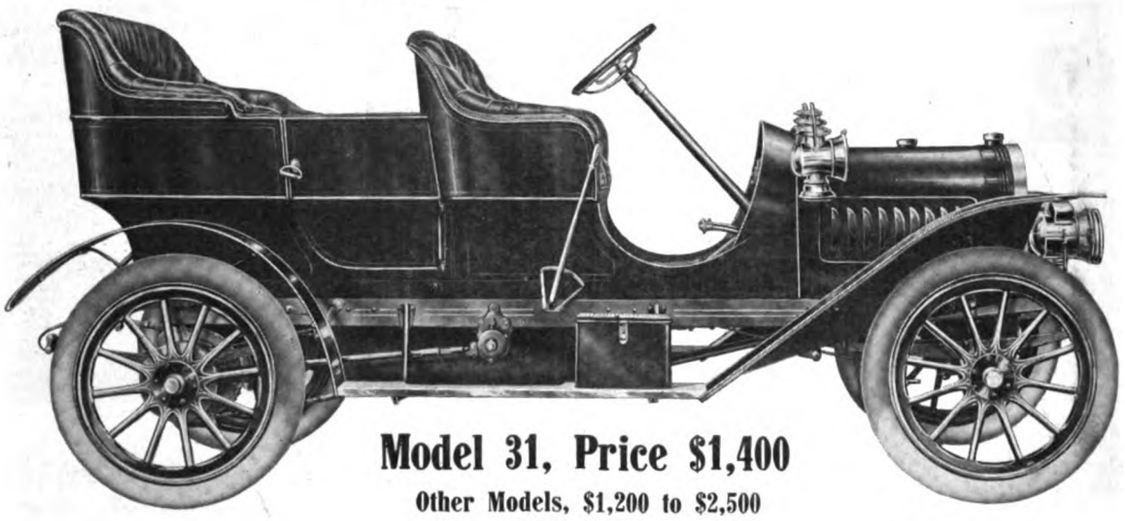
THE WHITE COMPANY

CLEVELAND, OHIO

PITTSBURG, 138-48 Beatty St. ATLANTA, 120-122 Marietta St.
SAN FRANCISCO, 1460 Market St. CLEVELAND, 407 Rockwell Ave.
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Rambler



Model 31, Price $1,400

Other Models, $1,200 to $2,500

YOU can do all kinds of work with this car as a handy Runabout without the tonneau; then put the tonneau on and take your family or friends for a ride in a roomy Five-Passenger Touring Car.

Many exclusive features make it the most remarkable two-cylinder car in this country selling at $1,400.

The powerful engine makes it a hill climber; the long wheel and full elliptic springs provide great comfort; you glide over rough roads without a jar.

It is easy to care for and always clean because of the few moving parts and the enclosed power plant, impervious to dirt, mud and water, and oil tight with proper lubrication.

Immediate access to every working part is provided. The low cost of maintenance is due to simple construction, small fuel and oil consumption and protection of parts against injurious road material.

THE CAR OF STEADY SERVICE

A Postal will bring you the facts.

Please write your name and address and "Model 31" on a postal and mail to us today. You will not obligate yourself in the least

THOMAS B. JEFFERY & COMPANY, Main Office and Factory, **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, August 6, 1908. No. 19

WANT A BETTER PRICE ON SPACE

Motor and Accessory Manufacturers Meet at Atlantic City—Would Force Concessions at Chicago Show.

As the result of a two-day session at Atlantic City, which was held on Thursday and Friday of last week, July 30 and 31, the Motor and Accessory Manufacturers, Inc., has as a body decided to take the stand that its members will not exhibit at the Chicago show unless the management grants a lower rate for space or gives a larger rebate. It will be recalled that last year, after much delicate negotiation, the association was able to report to its members that it had obtained a rebate of 15 cents a square foot, a victory in economy which was somewhat neutralized when the management later announced the price of space and disclosed that it had been raised just 15 cents a square foot, from 75 cents to 90 cents. Comparing the price at Chicago with the net prices for space at the New York shows, where the members of the M. A. M. through their association get substantial discounts and percentage rebates, it is thought by the accessory people that the Windy City figure is too high and they therefore decided upon an ultimatum to reduce it. The association got about $9,000 in rebates from the New York shows last season, and only about $2,000 from the Chicago show.

The show committee of the M. A. M., consisting of Messrs. Raymond, White, Post, Byrne and Castle, held its session on Thursday and prepared its report for presentation the next day to the main body of the membership. The board of directors also had a meeting to transact routine business. Attorneys Allen and Graham, of the National Grange, appeared in behalf of that body to interest the M. A. M. in contributing financially to the good roads movement with which the Grange is identified. Decision was reserved as to what support, if any, would be given by the association as a body.

On Friday the report of the show committee, recommending that the members refuse to exhibit at Chicago unless the rate were lowered, was presented to the consideration of the association as a whole, and was adopted almost unanimously. Another feature of the day was a speech by W. B. Lasher, of the Weed Chain Tire Grip Co., on the subject of price cutting and its evils. Lasher appealed for vigorous action on the part of the association against price cutters. Suggestions were made as to the compiling of a list of bona-fide jobbers, but no action was taken in this direction. The Hedgeland Mfg. Co., of Canton, O., was admitted to membership. About 40 members or less than one-fourth of the total, attended the meeting.

Weed and Parsons Sue on Non-Skids.

Injunction proceedings have been brought by the Weed Chain Tire Grip Co. of New York, and the Parsons Non-Skid Co., Ltd., of London, England, against the Todd Rubber Co., of New Haven, Conn., to restrain it from marketing tire chains. The action was brought in the United States court in Hartford, Conn., and infringements against the patents of both plaintiffs are alleged.

Shanks to be Stearns' Sales Manager.

Charles B. Shanks, formerly advertising and sales manager of the Winton Motor Carriage Co., of Cleveland, is to be the sales manager of the F. B. Stearns Co., also of Cleveland. Upon resigning from the Winton company, Shanks took the northern Ohio agency for the Chalmers-Detroit which he is running as an individual enterprise.

Close Aurora Plant for Creditors.

The liabilities of the Aurora Motor Works, of Aurora, Ill., against whom a petition in bankruptcy has been filed, are estimated at $30,000 while the assets are calculated at $10,000. The constable has closed the factory in behalf of employes who have wage claims aggregating about $900.

AGREE ON ONE SHOW AT CHICAGO.

Threatened "Independent" Project Abandoned—Accessory Makers Hesitate to Demand Price Concession.

Chicago show matters had a clarification on Wednesday so far as the car exhibitors were concerned, and the grievances of the American Motor Car Manufacturers Association were all placated so that there will be no "independent" or second Chicago show; but the demands of the Motor and Accessory Manufacturers, Inc., for more price concessions and the unwillingness of the show management to grant them has precipitated a real "situation."

At the meeting of the show committee of the National Association of Automobile Manufacturers the ultimatum of the accessory makers to the effect that they would refuse to exhibit at Chicago unless given a better price than 90 cents per square foot with a 15-cent rebate, was not officially delivered, although D. J. Post, of the accessory makers' show committee, was present with a copy of the M. A. M. Atlantic City resolution, ready to be presented at the proper time. Upon seeing the committee from the American Motor Car Manufacturers Association about to go into session with the N. A. A. M. show committee, Post refrained from any definite action in the matter until it would become clear as to whether the differences between the various bodies of car makers would be patched up and whether there was a likelihood of an "independent" Chicago show. The official proceedings of the day, however, went their course without the ultimatum being offered.

An informal gathering later, gave Post the opportunity to express the position taken by the Motor and Accessory people and to deliver their ultimatum in an unofficial way and, further, to hint at a show of their own. In an equally unofficial way it transpired that the Chicago management

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is indifferent to the ultimatum, the N. A. A. M. show committee having at a meeting some little time ago decided that the price given the M. A. M. was the lowest that would be made, and that the space could readily be sold to other exhibitors at a greater profit. Not only are jobbers and unattached accessory makers anxious for the space, but the manufacturers of motorcycles are clamoring for an opportunity to exhibit. The withholding of the ultimatum on the part of the M. A. M. still gives that body the opportunity to recede with good grace from the position it decided at Atlantic City to take, but in case its demands are pushed there is every prospect of a clash.

A new method of show allotment was agreed to as being satisfactory, by Messrs. Benjamin Briscoe, H. O. Smith, R. M. Owen, J. B. Bartholomew, and General Manager Alfred Reeves, of the A. M. C. M. A., in conference with the show committee. The exhibitors are to be divided into classes, the considerations of preference being membership in the N. A. A. M., seniority in the number of earlier shows participated in, membership in either the A. L. A. M. or the A. M. C. M. A., etc. All the acts and agreements of the show committee were later in the day approved by the executive committee of the N. A. A. M., the meeting being attended by S. T. Davis, Jr., W. T. White, Charles Clifton, Thomas Henderson, W. E. Metzger, Benjamin Briscoe, H. O. Smith, L. H. Kittridge, R. D. Chapin, W. M. Lewis, and S. A. Miles, and as members of special committees, M. J. Budlong and G. W. Bennett.

A special committee presented a report and samples of a standard rim which has been pronounced satisfactory, and recommended its adoption subject to satisfactory commercial details. Sanctions were granted for the "Independent" show at Grand Central Palace the first week in January and for the Licensed show at Madison Square Garden the third week in January.

Velie Vehicle's Ambitious Plans.

Contracts for the reinforced concrete factory of the new Velie Motor Vehicle Co., of Moline, Ill., have been let. It is announced that the capacity of the plant will be 5,000 cars a year, the leader to be a buggy type machine with modifications that will in many respects make it resemble the more usual automobile models. Major L. M. Fuller will be factory manager, and considerable factory talent will be drawn from the Velie Carriage Co.

Death of Panhard, the Pioneer.

Rene Panhard,organizer of the Panhard-Levassor Company, died last week. He was 67 years of age, and although he had retired from active business management was still on the board of directors of his company. His last public apearance was at the dedication of the monument erected in Paris to Levassor, his former partner.

TIRE MAKERS HOLD A CONFERENCE

Lively Session Over Plan to Reduce Tire Cost to the Consumer—Discuss Uniform Discounts.

Those tire makers who are members of the Motor and Accessory Manufacturers, Inc., held a meeting at the Waldorf-Astoria, New York, on Saturday last, to hear the report on the results of a very remarkable letter which, over their signatures, had been mailed to six thousand automobile and accessory dealers. The letter asked expressions of opinion from the dealers as to the advisability of a reduction of list prices and discounts on tires in order to minimize if not eliminate the evils of price cutting, and at the same time urged the dealers' co-operation to that end. The tire makers were to have listened to the returns from this letter at Atlantic City, in connection with the meeting of the main body, but it was later thought advisable to hold a separate and special meeting in New York because of the importance of the subject.

The session at the Waldorf was both interesting and animated. Preceding the roll call, Chairman H. E. Raymond amiably remarked on the presence of a Motor World representative in the corridor downstairs, adding that those present would all doubtless be able to read a report of the meeting in detail in the Motor World, as usual, and from then on there was not a dull moment. To the 6,000 letters sent out, replies had been received from less than 1,200, or in exact figures, just 18.4 per cent. Of these replies an overwhelming majority were heartily in favor of the proposed plan, which involves in no way anything that could be termed a price agreement, in the usual sense, as each concern is left perfectly free to set its own list prices, though in all probability all list prices would be lowered under the proposed scheme.

The main idea is to reduce the cost of tire up-keep to the automobile owner, and by a uniform discount of some such slim figure as 15 per cent., make impossible the thriving business of cut price concerns and divert the renewal business to the legitimate dealer to whom it properly belongs. To make such a plan sucessful the support of a majority of the dealers is, of course, essential.

In considering the responses received by mail, the point was made that whereas the dealers in favor of the plan would naturally say so, those who were lukewarm or distrustful, if not openly hostile, would hesitate about committing themselves in writing and the silence of so large a proportion would seem to make their attitude open to question. On the other hand, it was urged that the assurances of support and co-operation from the Association of Licensed Automobile Manufacturers and from the American Motor Car Manufacturers' Association, at whose request the matter of reducing tire cost to the consumer was first taken up, were a sufficient guarantee of the favorable attitude of the majority of the dealers.

After a letter from a prominent automobile manufacturer had been read, commending the proposed action and setting forth the claims of the reputable dealers and the poor consumers, and while the discussion was at its height, one skeptical member of the assemblage, "foolish like a fox," slipped quietly from the room and used the telephone. He shortly marched back to the meeting again and announced, somewhat to the discomfort of the chairman, that he had just called up the local branch house of the solicitous maker and without being known had received quotations with a big discount on two well known makes of tires, one of which was—well, a smile went the rounds when it was mentioned.

On the proposition that lists and discounts should be lowered and the dealers thereby protected and the consumers benefited, all the makers were apparently in perfect accord. But when it came to a matter of absolutely uniform discounts, things grew very lively. It was the smaller makers and the late comers in the field who questioned the wisdom of "tying themselves up" in a position which appeared to them to place them at a disadvantage. "Some tires are demanded; others have to be sold," was the gist of the argument, and it was maintained that discounts should permit the making of special inducements, if necessary.

Having struck this obstruction, consisting of the opposition of some of the makers to an absolutely uniform discount feature, the plan was not ripe for immediate adoption, and so it was agreed to carry it over to another meeting. This latter is to be held in Cleveland on August 11, at which time the tire makers will buckle down and see what can actually be accomplished.

Dale Leaves a Large Estate.

The will of Charles H. Dale, the deceased president of the Rubber Goods Mfg. Co., has been filed in the Westchester county surrogate's office, at White Plains, N. Y. It lists an estate of $2,500,000, all of which goes to his wife, Jennie L. Dale. No bequests are left to his relatives or employes. It is said that he gave considerable property to them before he died.

Grossman Goes in for Himself.

Joseph Grossman, for the past two years or more the manager and treasurer of the National Sales Corporation, has resigned. He will go into business for himself.

Hopkins Resigns from St. Louis Car.

L. A. Hopkins, manager of the St. Louis Car Automobile Company, of New York, has resigned his position. The resignation takes effect immediately.

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YEAR'S EXPORT TOTAL DECLINES

June Completes the Fiscal Twelve Months with a Slight Loss—The Record in Detail.

June completing the fiscal year of the export record, the figures for the twelve months show that $5,277,847 in American cars and parts were exported, as against $5,502,241 for the preceding year. The number of machines sent out during the period was 2,477 as against 2,862 for the year ending June, 1907, the sums represented by the cars alone being respectively $4,656,991 as against $4,890,886. The shipment of parts was a little heavier for the year just past, however, the sum being $620,856 as against $611,355.

For the whole year through the United Kingdom proved the best customer for American cars and parts, its purchases amounting to $1,796,509 as against $1,530,304 for the preceding year. British North America, the next best customer, shows a decline, its total being $951,386 as against $1,175,334. France, "the home of the automobile," shows an increasing inclination to buy American cars, being third on the list with a year's total of $692,365 as against $512,524. Germany, too, shows an increase, as do the West Indies and Bermuda, South America, "Other Asia" and Oceania, and the group described in the list as "Other Countries."

The month of June discloses losses in eight of the fourteen divisions. The United Kingdom heads the list of those on the wrong side, but both France and Germany have gains for the month. Mexico's purchases for the month amounted to less than half of what they did in June of 1907, dropping from $49,989 to $2,491, while South America dropped from $19,641 to $6911, or about a third. The total for the month was $710,722 as against $732,054 for June, 1907.

The summary in detail is as follows:

	June		Twelve Months Ending June		
	1907	1908	1906	1907	1908
Automobiles and parts of—					
*Automobiles	$669,570	$648,267	$3,497,016	$4,890,886	$4,656,991
Parts of	62,484	62,455		611,355	620,856
Exported to—					
United Kingdom	310,632	293,003	948,995	1,530,304	1,796,509
France	67,892	104,475	282,317	512,524	692,365
Germany	36,487	52,635	99,732	155,623	178,914
Italy	11,675	9,761	265,970	254,694	247,357
Other Europe	61,124	53,970	199,589	288,921	186,968
British North America	154,923	141,550	648,438	1,175,334	951,386
Mexico	49,989	22,491	422,626	812,639	401,617
West Indies and Bermuda	8,385	8,836	241,353	207,390	250,201
South America	19,641	6,911	96,174	204,211	220,644
British East Indies	682	952	37,644	34,608	29,510
British Australasia	4,974	1,972	160,944	207,715	155,722
Other Asia and Oceania	5,489	12,689	50,335	97,050	135,938
Africa	61	41	28,529	8,874	7,429
Other countries	100	1,436	14,370	12,354	23,287
Total Automobiles, and parts of	$732,054	$710,722	$3,497,016	$5,502,241	$5,277,847

*Number not stated prior to July 1, 1906.

In the Retail World.

A new selling branch of the Atlantic Motor Car Co., of New York, is to be opened in Newark, N. J., for the sale of Stoddard-Daytons. A large building at 2228-2239 Halsey street is being erected for the purpose.

Ralph E. Brown, formerly of the Winton branch in Cleveland, has succeeded O. L. Gooden as the Winton agent in Buffalo. He will handle Winton Sixes exclusively and has secured a Main street location in automobile row.

The Michelin Tire Co., of Milltown, N. J., has opened a branch at 2001 Euclid avenue, Cleveland, O. R. B. Tracy has been appointed branch manager and D. K. Dickinson, formerly of the Hartford Rubber Works, will act in the capacity of assistant manager.

The Week's Incorporations.

Vincennes, Ind.—Webb Motor Fire Apparatus Co., under Indiana laws, with $100,000 capital. Corporators—Albert C. Webb, Joplin, Mo., and others.

Philadelphia, Pa.—American Pneumatic Motor Co., under Delaware laws, with $1,000,000 capital; to manufacture cars of any kind, to be propelled on land or water by compressed air.

Newark, N. J.—Empire Tire & Supply Co., under New Jersey laws, with $100,000 capital; to manufacture automobiles, motors, appliances, supplies, tires, etc. Corporators—W. L. Montrose, C. C. Henry, S. J. Campbell, Newark, N. J.

New York City, N. Y.—Carl H. Page & Co., under New York laws, with $5,000 capital; motor parts. Corporators—Carl H. Page, 1627 Broadway; Robert H. Montgomery, 165 Broadway; Henry Bennett Leary, 55 Broadway, New York City, N. Y.

New York City, N. Y.—Renault Freres Selling Branch, Inc., under New York laws, with $100,000 capital. Corporators—Fernand Renault and Charles Richardiere, Billancourt, France; Paul Lavroix, 275 Central Park West, New York City, N. Y.

MERGER PLANS ARE EXPANDING

Many Concerns Would be Involved in the Big Combination—Parts Makers Included.

The projected merger of the Maxwell-Briscoe Motor Co., of Tarrytown, N. Y., and the Buick Motor Company, of Flint, Mich., has in the later negotiations taken the form of a $25,000,000 company, to combine not only these two concerns, but others as well, including parts makers, though the latter are to come in later. The stock to be issued would be $14,000,000 in preferred, and $11,000,000 in common Holders of the Maxwell-Briscoe stock would receive in exchange for each share, two shares of the new preferred and one of the common. The new concern would be known as the International Motor Co., and it is understood that several members of the banking house of J. P. Morgan & Co. stand ready to underwrite $900,000 of the preferred stock, offering it to the public at 97½ with a share of common thrown in, and representing the preferred as a sure 7 per cent. dividend payer and the common as a possible 25 per cent. earner.

In addition to President Durant of the Buick company and President Briscoe of the Maxwell-Briscoe company, the names mentioned in the negotiations include W. P. Hamilton and W. P. Horn, of Morgan & Co., and Otto J. Merkle. The attorneys for the transaction are Ward, Hayden & Satterlee. Both Hamilton and Satterlee are sons-in-law of J. P. Morgan.

Hartford Dealers Decide Show Date.

Because of the great success of last year's effort, the Hartford Automobile Dealers' Association has decided to hold another local show and to give its control over to the men who brought about such excellent results on the previous occasion. The committee chosen to conduct the affair consists of F. W. Dart, S. A. Miner and E. G. Biddle, and the dates chosen are February 27 to March 6. The show will probably be held in Foot Guard Armory, unless the new National Guard armory is completed in time to be available. Last year this committee, after closing the show affairs, paid exhibitors a dividend of 92⅔ per cent.

Creditors Attach a Body Concern.

The Auto Body and Top Manufacturing Co., a Hartford concern recently organized to do a chiefly local business and conducted by Walter a French and Joseph T. Tilden, has suspended business for the time being because the contents of the factory have been attached. The attaching creditors are F. S. Carr & Co., of Boston; the Sewa-d Rubber Co., of Berlin, Conn., and the Bonner-Preston Co. and Harry Goldberg of Hartford, Conn.

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FRANKLIN Automobiles

The big surprise of the Glidden tour.

Nobody who knew the Franklin, was surprised at what it did in the latest Glidden tour, but the worshippers of the old-time fetish enormous weight and bulk, with hard riding and encumberance, complicated water-cooling system—found their idol pretty badly smashed. To them the Franklin performance was the surprise of the tour.

Converted Skeptics

This being the first time a Franklin ever entered a Glidden tour it was watched probably closer and sharper than any other automobile in the contest. The skeptics were all ready to say, "I told you so," but instead they threw up their hands and declared, "We never would have believed it."

Perfect Scores

Of the four Franklins entered two made perfect scores. Not one was penalized for anything but broken springs.

These had previously been driven from 8,000 to 10,000 miles. The springs were not wrapped. 90 per cent. of the other automobiles had their springs wrapped or were equipped with shock absorbers. All the Franklins were stock cars, without any special preparation.

Franklin Air-Cooling

In spite of the many hills, hard pulling, and much low gear work, no Franklin ever had to stop for a minute to cool off. Nearly every water-cooled automobile had to stop somewhere to cool off. Some of them at times had to stop every 20 or 30 miles to take on water. Many steaming and boiling radiators were to be seen; some were leaking.

An Unbiased Report

The *Horseless Age* says, "That Air-cooling is a success has been fully proven by the performance of the Franklin cars. They are among the leaders at the night control each night."

"The performance of the Franklin Type D was a revelation. It made better average time, up hill and down, than some of the 50 and 60 h. p. six-cylinder cars. The engine ran perfectly and without the slightest sign of overheating, although it was put to every test of hard pulling and overloading that it seems possible for an engine to be subjected to."

Climbing

Even the Franklin runabout climbed better than automobiles with three times the power rating.

In one case the Franklin towed two bigger cars up a steep hill.

The type G went up some mountains on the second gear which many of the water-coolers had to take on the low gear.

No Mechanical Troubles

Day after day the official observer reported "Nothing done to Franklin cars."

The regular equipment bag, and the extra equipment bag were never opened on any of the Franklin automobiles.

Two Franklins had the 1909 high-tension magneto ignition only, and not even a plug was removed from these engines. There were no ignition troubles whatever.

The Easiest of All Tires

The Franklin had less tire trouble than any other automobile. The only tire trouble with Franklins was cutting, by glass.

The only car in the entire contest that had no tire trouble whatever was a Franklin—a model H six-cylinder automobile carrying five passengers and five suit cases.

This contest has demonstrated convincingly to many who never realized the truth before, that Franklin air-cooling, light weight and easy riding gives more going ability and more comfort and safety than you can get out of a heavy, hard-riding water-cooled machine no matter how it is rated nor how much it costs; and that you get all this with less trouble and lower operating cost.

Owning-cost is what counts—owning-cost for actual road ability. That makes Franklin economy.

16 h. p. 4-cylinder Runabout $1,750	28 h. p. 4-cylinder Touring-car or Runabout...$2,850
16 h. p. 4-cylinder Touring-car.... 1,850	42 h. p. 6-cylinder Touring-car or Runabout... 4,000

Prices f. o. b. Syracuse.

Write for the 1909 catalogue.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, AUGUST 6, 1908.

Building Inferences on Fact.

The temptation to manufacturers to exploit the really wonderful records made by some of their cars as to up-keep cost is practically irresistible, and it is only an evil temptation to be resisted where there is lacking a degree of caution which will properly limit the claims and reasoning with which such figures are given out. Unfortunately the enthusiasm of the moment quite frequently outbalances good judgment when the public is to be informed as to the performance of the cars, and exaggeration of suggestion is employed to give the impression that any purchaser may reasonably expect to get equally good results and to incur as little expense.

Opposed as are the epigrams that "Figures never lie" and that "You can prove anything by statistics," they both have application in the elaborate returns from inquiries as to upkeep cost. Every manufacturer is at liberty to conduct his own inquiry in his own way and to strangle unfavorable figures if he feels like it. There is an advantage in devising the plan of the inquiry so that it will bear the stamp of completeness and thoroughness, thus being more convincing to the careful student of figures, but deficiencies in this respect can, to a certain extent, be covered over by the force of heavy advertising and clever arrangement of the tables.

Undoubtedly the individual work of several manufacturing concerns in obtaining data as to the upkeep cost of their cars, has been a valuable contribution to the general subject of motoring, and the reward that they have found in examples of durability and economy in their cars has been adequate compensation. In most instances the facts thus obtained have been used with commendable discretion. Their mere presentation as facts, bare of obvious comment or extensive reasoning, is impressive and favorable, but the addition and dressing up which such statistics are only to apt to receive in the way of inferences and reductio ad laudatum, with a wealth of assertions about "average cost" that the buyer may rely on, rather pull on those who dislike being pushed into judgments and conclusions.

The prospect of there ever being any standard or uniform method of inquiry and publication of results as to upkeep cost and durability of various makes of cars is infinitely remote because of the practical difficulties in the way. To the prospective buyer, however, some such scheme would appeal, as giving him absolute and correct comparisons. Lacking such a system, it remains for the makers themselves to prepare and publish such statistics in such a manner that no doubts will arise but that the conclusions expressed in connection with them are fully warranted by the facts.

The Problem of the Agency.

It is generally admitted that the selling of automobiles is constantly becoming a more difficult matter, and that as time goes on, the volume of sales business is growing to depend less upon the merits of the car itself and more upon the sagacity and persistence of the salesman. It is also acknowledged that this is resulting in a weeding out process among selling forces which is destined to have a clarifying influence on the trade in the long run. In general this tendency is remarked in connection with the selection of salesmen. As a matter of fact, however, it is even more marked in the case of the agent. For where the salesman's responsibility is practically ended with the closing of the sale and delivery of a car, the agent is expected to take good and faithful care of all his customers even after they have gone abroad with their machines, in order to round them up at the end of a measurable season, ready for new cars—or so his function may be construed.

In this respect, it is undoubtedly a fact that the manufacturer is called upon year by year to face a problem of growing difficulty in the placing of his agency contracts. With the closing in of the lines of business and the increasing rivalry of the trade, it is no longer possible to retain an agent for his business ability alone, for his experience in the industry, nor for the patronage which his position or acquaintance may be supposed to command. The ideal agent must have each of these qualifications, and must in addition, be an alert, clear-headed business getter, as well as a more or less successful executive.

The time has passed when mere geographical location and social pull were sufficient qualifications to suit the careful sales manager. Men who are really competent agency heads, are being sent about from coast to coast, and from north to south and south to north, to replace other men whose success has been tempered with varying degrees of dissatisfaction. There are good heads of departments or branches, who understand the selling business, and who possess sufficient adaptability to enable them to comprehend the varying conditions imposed by changes of location. It is a noteworthy fact in this connection, that just such changes are not being made indiscriminately, but are governed by the requirements of the posts and by the fitness of the men to fill them.

Hitherto, much of the really hard work that has been done in the industry has been carried out in the manufacturing departments. Slow and expensive manufacturing processes, constant alterations of design, unsatisfactory manufacturing processes, constant alterations of design, unsatisfactory and ever changing market conditions, have combined to render the path of the factory man a thorny one. Now, with the increase in specialization, the growing use of special tools, and the tendency to build cars on the multiple production basis wherever practicable, it would seem that a reversal

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is about to take place—that the factory man must be due for a period of more orderly career than has been his lot hitherto, and that the man in the field must live the uneasy life. All of which must tend to complicate the selection of agents, and deprive that section of the industry of the sympathy which it actually merits.

Ethics of the Repair Shop.

There are so many unsatisfactory features connected with the business of repairing cars, and the difficulties attendant upon any attempt to run it along strictly business lines are so nearly insurmountable, or so it appears, that the dealer who is not absolutely dependent upon it as an adjunct to his garage interests, is sometimes tempted to discontinue it entirely, and frequently fails to give it the attention which it really merits. As a source of revenue, the profitable nature of the automobile repair shop is beyond question. Yet in times of prosperity in the selling line, or in the operation of the garage alone, the real value of the repair shop as an adjunct to the other departments, may not be fully appreciated.

The repairman who is also an agent, ought to be at considerable pains to hold the patronage of owners of his particular make of machine, not simply for the sake of his own convenience in the matter of selling replacements and handling repairs to mechanism with which his mechanics are thoroughly familiar, but also for the sake of retaining the car of the owner. By this means, the owner, and through him the manufacturer, of whose forces the agent is practically an enlisted member, are enabled to keep in closer touch than is possible where the car goes out of existence, as it were, when it leaves the floor of the agency. The result of this is that if the repair work is handled with sufficient tact, the shortcomings of any given model may be bridged over in many instances, mistakes in design and construction may be rectified without undue hardship on either side, and the rival agent is deprived of the coveted opportunity of drawing invidious comparisons.

In this connection, the possibility that unscrupulous repairmen who are interested in cars of other makes may even countenance the deliberate inflation of repair bills, or wink at the tricks of disgruntled mechanics who seek to satisfy some grude against the manufacturer, is one which is so real as to assume almost the appearance of a risk in this connection. No matter how abundant the owner's faith in his machine, it cannot be proof against continued and apparently well founded insinuations of its inferiority. Nor is it likely that even unmerited criticisms will fall upon wholly deaf ears, if he happens to have a grievance of some sort against the agent from whom he purchased the car.

It is thus a very good thing from the dealer's standpoint to retain the good will of all his customers. When in order to do this, it becomes necessary to create an efficient and wholly practical repair department, no pains should be spared to do so, even though the direct monetary reward be not a large one.

As to reaching out for business on cars of other makes, much depends upon the matter of shop equipment, and the readiness with which duplicate parts may be obtained. Where replacements are not easily available, the well equipped mechanic is always ready to turn out a substitute—more or less suitable for the purpose, according to his own intelligence and the facilities at hand. But in nearly all cases, the cost of such replacements will be higher than those demanded by an honest maker; and where such is the case, the interests of the customer are not served to the best advantage in consequence.

Whatever may be the evil effects upon the selling business which result from the "knocks" of envious or malicious rivals, the effects of the customer's own dissatisfaction on questions of repairs are worse, since they effect the proprietor directly and are in no way lightened upon the broad back of the manufacturer. To the man who accepts it as a requirement of the agency the repair business thus becomes a necessary evil, and to him who makes it a specialty, a source of deep difficulty. At the same time, it is not without its compensations, and when operated under favorable conditions, these are of overwhelming importance.

The Army Chauffeur.

An interesting reflection on the chauffeur problem as governing the reliability of car performance is furnished by the remarkable incident in connection with the use of the army automobiles at the recent manoeuvres at Pine Camp. Two cars were supplied for the purpose, of the same make and model, and supposedly duplicates in every respect. At first both machines were unsatisfactory, and seldom were in a condition for service. Then a guard was placed over one of them, and this machine was not available for use save by order of the commanding general. At once the conditions of unreadiness disappeared, with the result that the machine created an impression which is aptly conveyed in General Grant's expression, "The automobile is a necessary adjunct to the army's equipment." The other automobile, a mate to the one which excited General Grant's remark, received an adverse report from the officers to whose use it was assigned. This machine was not guarded and positive evidence is supplied that its use was not confined solely to military service.

The conclusion therefore is justified that the civilian chauffeur, not the manufacturer, may be blamed for the unsatisfactory action of the one machine. And, that the automobile as an instrument of transportation is not available for use in time and place of battle is a conclusion which is not borne out by facts and therefore is unjust and unfair. It will be interesting to read the report of the use of power driven vehicles in the army when the machines are exclusively operated by men of the engineer corps who are subject to army discipline.

COMING EVENTS

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

Sept. 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7, Lowell, Mass.—Lowell Automobile Club's 200 miles road race, on Merrimac Valley boulevard.

September 7, Columbus, Ohio—Columbus Motor Club's 24 hours endurance race at Columbus driving park track.

September 7-12, Hartford, Conn.—Connecticut State Fair Association's outdoor show and grand circuit races at Charter Oak Park.

September 12, Louisville, Ky.—Louisville Automobile Club's race meet at Churchill Downs.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

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SMALL FIELDS AT WILDWOOD MEET

Postponed Races Attract 10,000 Spectators —Dennison, Bourque and Wilkie Capture Nearly All the Honors.

A small field of competitors which gave practically no opposition to one or two cars, made the postponed boulevard meet at Wildwood, N. J., on Monday last, 3d inst., not as interesting as otherwise might have been the case. The meet had been postponed from Saturday because of rain, but despite the lay over more than 10,000 season resorters and week-enders witnessed the events, all but one being at one mile.

Two accidents before the meet fortunately did not prove serious. The accident in which Richard Sellers, a well-known Philadelphia club man, was injured, was unusual. Sellers was riding in Richard Williams' Pennsylvania racer, when the top of the coil box flew off and jammed in the clutch operating mechanism, so that it could not be released. The car was running at better than a mile a minute when the mishap occurred and two alternatives presented themselves to Williams as he neared the end of the course. One was to run into the inlet, and the other to turn into a cross road. The driver took the latter choice and the car overturned, rolling over and then righting itself. Sellers fared worse than Williams, who escaped with severe contusions and lacerations of the arms and body. Sellers' shoulder was dislocated besides other injuries.

The other accident occurred to Walter Vennel. The hood of his Stanley steamer worked loose and flew off, striking Vennel in the head and shoulders. He was badly cut but not seriously.

Differing from Saturday, when it rained in torrents, the course was thoroughly dried and smooth. Good time resulted, but the records for the course, established on July 4th, were not touched. A. A. Dennison, William Bourque and Edward Wilkie had easy picking, winning every event to which they were eligible. The summaries:

Gasolene cars under $1,250—Won by Edward Wilkie (Buick); second, E. W. Smith (Middleby). Time, 1:19.

Gasolene cars, $1,251 to $2,000—Won by Edward Wilkie (Buick); second, E. W. Smith (Middleby). Time, 1:22.

Free-for-all—First heat won by William Bourque (Knox); second, Walter Vennel (Stanley); third, J. W. Parkin, Sr. (Parkin). Time, 0:49⅘. Second heat won by A. H. Dennison (Knox); second, D. Walter Harper (Stanley); third, W. H. Sharp (Sharp Arrow). Time, 0:50. Final heat won by Dennison; second, Bourque. Time, 0:50.

Gasolene cars, $2,001 to $3,000—Won by W. Bourque (Knox); second, W. H. Sharp, (Sharp-Arrow). Time, 0:54⅗.

Gasolene cars, $3,001 to $4,000—Won by William Bourque (Knox); second, J. W. Parkin, Jr. (Parkin). Time, 0:50⅘.

Four cylinder gasolene cars over $4,000—Won by William Bourque (Knox); second, H. J. McMichel (Stearns). Time, 0:54⅗.

One kilometer time trials—Won by A. H. Dennison (Knox); second, Wm. Bourque, (Knox); third, J. W. Parkin, Jr. (Parkin); fourth, D. W. Harper (Stanley); fifth, Ed. Wilkie (Buick). Times, 0:28, 0:29⅕, 0:30, 0:31⅗, 0:41.

Steam cars only—Won by D. Walter Harper (Stanley); second, Walter Vennel (Stanley). Time not taken.

Mile time trials—Won by A. H. Dennison (Knox); second, William Bourque (Knox); third, W. Parkin, Jr. (Parkin); fourth, W. H. Sharp (Sharp-Arrow); fifth, Ed. Wilkie (Buick). Times, 0:47⅗, 0:48⅘, 0:50⅗, 0:53, 1:08.

Pickens Again Hankers for $port.

Once more William H. Pickens emerges into the limelight of publicity. Pickens, who was the United $tates Motor Racing Association, but now "of the Federation of American Aero Clubs, with headquarters in Chicago," as one of the Chicago papers puts it, is manifesting again his interest in automobile racing as $port. The coming State Fair to be held in Mississippi looks good to him as an opening and he has written to the management proposing a series of automobile races by expert drivers as a feature. Pickens has looked over the ground at Jackson, says the track there is one of the best in the country for such races, and has presented a brilliant publicity program Jackson does not appear to warm to the Pickens program, however. Possibly his fame has preceded him thither.

Asbury Park Turns Latham Down.

Clouds have fallen over the pathway to success that C. Wood Latham blazed for himself when the city of Asbury Park engaged him to organize its September Automobile Carnival. They have taken the shape of allegations concerning unpaid bills for board and entertainment. Whether they are nothing more than allegations, or not, they have shed a cold shower upon his budding hopes, for the business men promoting the affair have given formal notice that no longer is he authorized to represent them in any way.

Australian Hospitality for American Tars.

Arrangements are being made by the Automobile Club of Victoria, Melbourne, Australia, to entertain the officers of the United States Navy when the fleet visits Australia in September. The entertainment will consist of an automobile trip to Fernshaw and the Blacks' Spur.

The secretary of the A. C. V. has sent a circular to the club members requesting them to supply the cars and act as hosts to the sailor occupants of their respective machines.

TO PROMOTE METROPOLITAN RACES

New Association Organizes with That Aim —Promises to Steer Clear of Friction with Other Bodies.

To undertake the direct local control of automobile racing around New York City, a new organization has been formed, which is to be known as the Metropolitan Motor Association. It is not wholly new, however, being more or less in the nature of a phoenix emerging from an egg warmed in the ashes of "Tom" Moore's so-called Metropolitan Automobile Association and later Automobile Manufacturers' Committee. It starts out with the apparent conviction that there is a field open to its occupancy where it can exercise its propensity for promoting sport without engendering friction with other organizations.

Following a convivial dinner at Rector's, a meeting was held last Friday at which a permanent organization was adopted, and the "objects" of the organization set down in cold black and white. Furthermore it was decided to hold a 24 hour race at Brighton Beach, together with a number of sprint races.

The "objects," as formally indited, are:

"To support only such contests held in and within 75 miles of New York City as have for their first object the stimulation and growth of public interest in automobile events and which will benefit the sport and industry as a whole.

"To eliminate from such contests inexperienced drivers and officials.

"To regulate the number, length and conditions of contests and races.

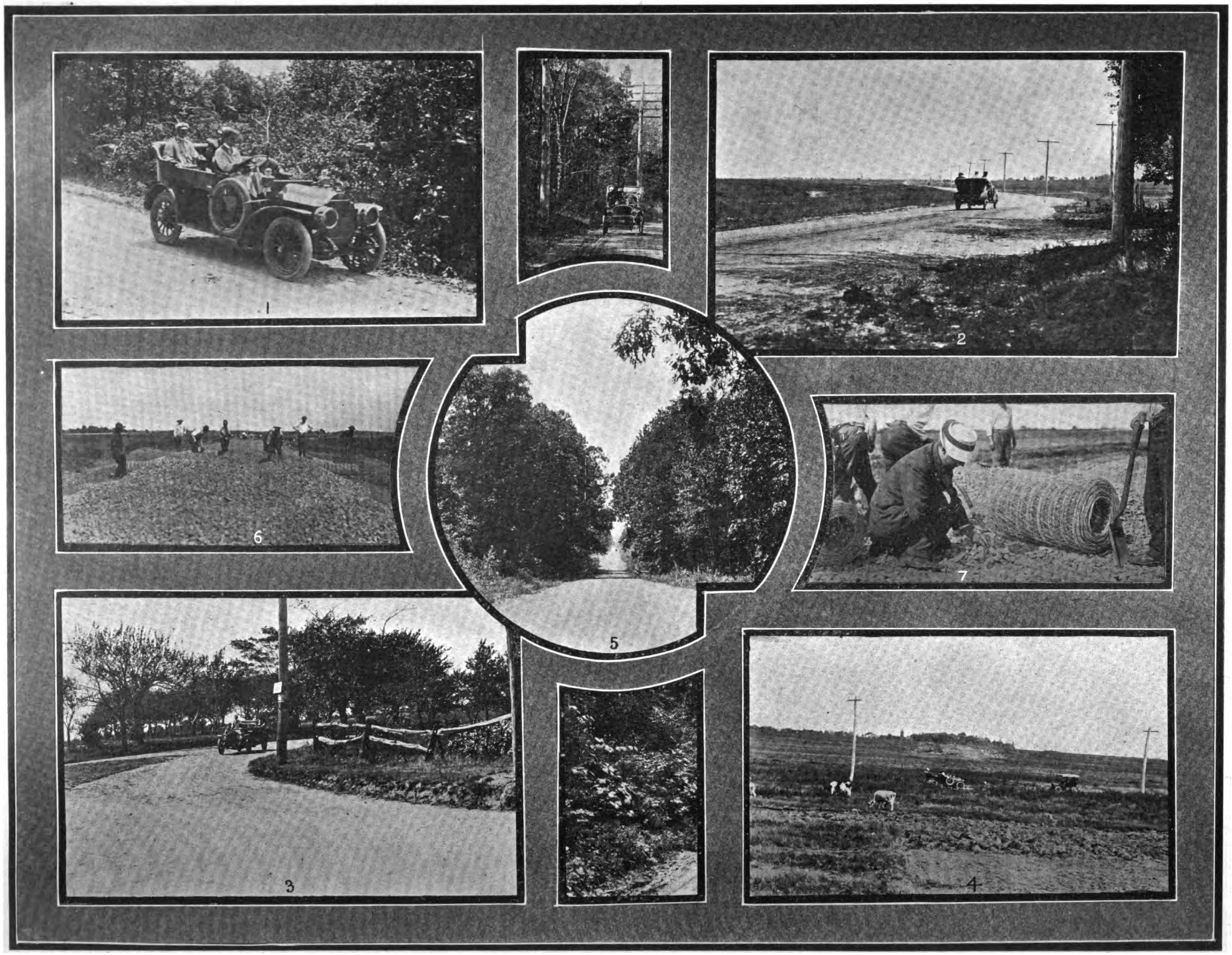
"To safeguard the interests and safety of all contestants and the public by rigid supervision of courses over which contests and races are to be held."

The association is careful to disclaim any intention of trying to usurp powers or functions of the American Automobile Association, and hopes to find a basis "whereby all interests, including clubs, associations and contestants can get together, without friction."

Those present and who have been enrolled as the charter members, were: H. A. Lozier, Lozier Motor Co.; C. A. Singer, Palmer & Singer; Paul LaCroix, Renault Co.; E. R. Hollander, Fiat Import Co.; C. F. Wyckoff, of Wyckoff, Church & Partridge; C. M. Hamilton, Isotta Import Co.; Harry Houpt, of the Harry Houpt Co., and F. E. Moskovics, of the Allen-Kingston Co. The officers chosen were: C. F. Wyckoff, president; E. R. Hollander, vice-president; Harry Houpt, treasurer, and Walter Allen, secretary. To help in the arrangements for the Brighton Beach races, the services of Fred Wagner have been enlisted, and for the 24 hour event at least two entries from each of the members is promised.

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TYPICAL VIEWS OF THE LONG ISLAND MOTOR PARKWAY.



1, WHERE THE PARKWAY BEGINS, INTERSECTING SWAMP ROAD. 2, WHALE NECK AVENUE, SHOWING ROAD EXTENDING INTO HEMPSTEAD PLAINS. 3, TURN FROM OLD WESTBURY ROAD INTO COUNTRY ROAD. 4, INTERSECTION OF PARKWAY AND WHALE NECK ROAD. 5, SERIES OF KNOLLS, THREE MILES EAST OF JERICHO TURNPIKE. 6, VIEW SHOWING METHOD OF CONSTRUCTION. 7, ENGINEER BARNES MEASURING DEPTH OF ROCK TO BE COVERED BY WIRE NETTING.

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VANDERBILT COURSE COMPLETE

Perfecting Arrangements for the Great Race —Mammoth Grandstand Projected— Troops to Maintain Order.

With the announcement of the complete course of the Vanderbilt cup race there is supplied practically all of the advance information that can be desired, except the final list of entries. The race itself, as previously announced, is to take place on October 24, and the course selected is in Nassau county, Long Island. The distance will be 254 miles or ten laps around a circuit of 25.4 miles. Of the course to be used, 11 miles are on the new Motor Parkway and 14.4 miles on the public roads. There is but one railroad crossing at grade and but eight turns of any consequence are encountered. A grandstand to seat 10,000 people will be erected and 11 miles of parking space along the Motor Parkway will be set aside for those who wish to view the race from their cars. Bonds for $25,000 are to be given that all damages to the roads will be repaired, and 1,200 uniformed troops will guard the course.

The nature of the course chosen is such as to give opportunity for tremendous and sustained speed. As indicated in last week's Motor World, the 11 mile section of the Parkway which is to be used is being hastened to completion and its turns are being banked with a care and skill that will rob them of practically all danger. Tests of the curves are to be made in a few days with a racing machine, to make certain that the degrees of pitch and curvature have been laid out in such a way as to take care of the enormous centrifugal force developed in fast work. If the tests disclose the possibility of improvements, the necessary changes will be made, so that by the time the race occurs the Parkway section will be in perfect shape.

Similarly a great deal of preparation and care will be given to the open roads that are to be used, the curves being banked where it is possible and widened where conditions permit. All the bad holes and bumps will be given attention and the whole surface given treatment to prevent dust.

It was not until last Saturday night that the final details of the course were given out. The accompanying map shows the route the machines will traverse and the location of the grand stand, together with the chief points marking the path.

The northern boundary of the course is the well known Jericho turnpike, beginning at the old Westbury road about three miles east of Krugs Corner and running 10 miles east to the intersection of the Woodbury and Hicksville macadam road.

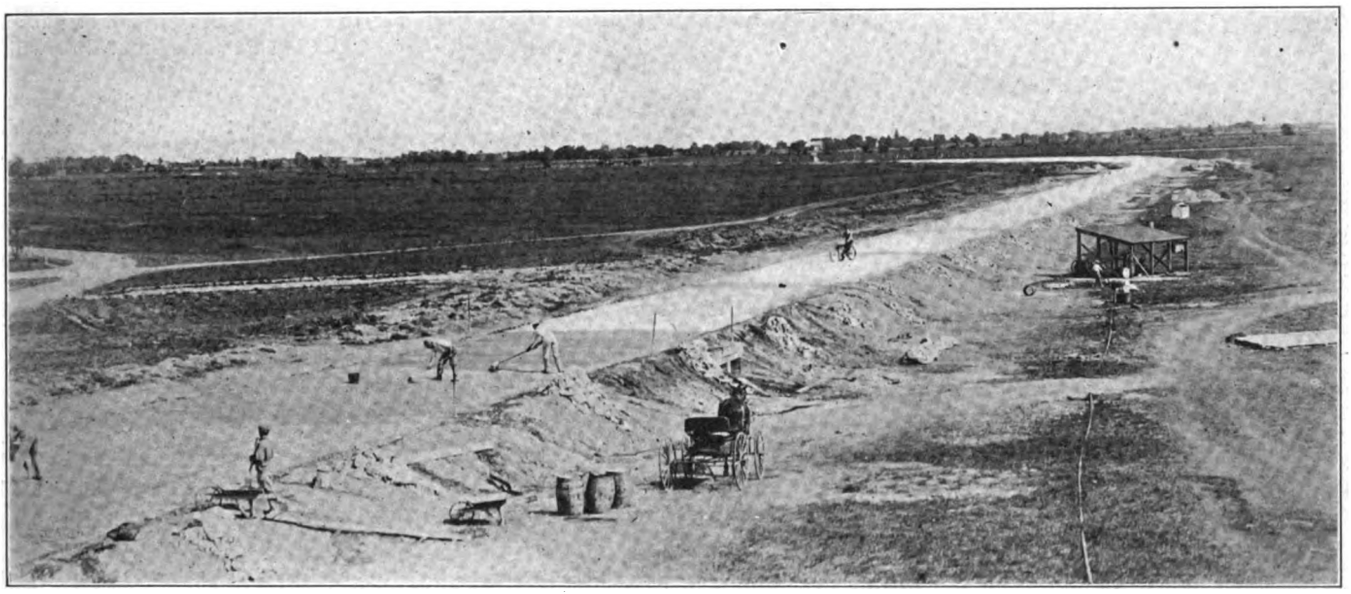
The western boundary of the course is composed of a portion of the old Westbury road running south from the Jericho turnpike to the Old Country road and along the Old Country road about an eigth of a mile to Whaleneck avenue, thence south to the beginning of the Motor Parkway.

The southern boundary is composed entirely of the new cement Parkway beginning at Whaleneck avenue and paralleling an abandoned branch of the Long Island Railroad known as the Hempstead branch, for a distance of nearly 11 miles to a small settlement called Bethpage.

The eastern boundary of the course begins at the termination of the cement Parkway at Bethpage and runs north along Round Swamp road to its intersection with the Woodbury and Hicksville macadam road, along which it continues to the Jericho turnpike, where there is a sharp left turn known as the "Flatiron." From this turn the course practically coasts westward on Jericho turnpike and thence south to the beginning of the Parkway.

There are eight sharp turns on the State and county road portions of the course, but the Parkway turns are all beautifully rounded and banked. The surface of the cement is as smooth as a city concreted street and the possibilities for high speed are quite enough to satisfy the ambition of the most daring racing drivers in the world.

It is proposed by the Motor Parkway corporation to erect a mammoth steel grand stand on the south side of the cement roadway about four miles from its beginning. From this stand spectators will have a bird's-eye view to the east and west for the entire 11 miles so that it will be possible to see the cars as they attain their highest speed on the beautiful S turns and as they pass over the graded viaducts crossing the railroad and intersecting public highways. In extent this grandstand view will be about ten miles greater than at any previous Vanderbilt race.



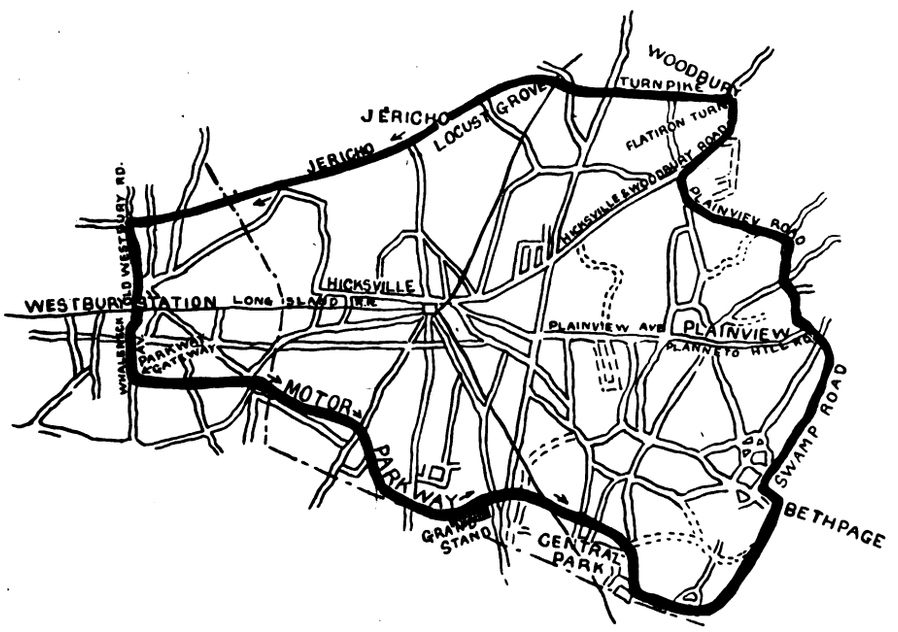
COMPLETED SECTION OF LONG ISLAND MOTOR PARKWAY, SHOWING S CURVE IN DISTANCE.

The new course might aptly be termed "The Plateau Racing Drome." The first impression of the visitor is that he would like to be up in a balloon a few hundred feet and see the entire circuit, and this would be quite possible because of the almost monotonous flatness of that section of Long Island. Beginning at the Jericho turnpike and the old Westbury road the course sweeps through the famous Hempstead plain country, where there is not a vestige of shrubbery or any wood. All of the cementway passes through a country of the same character—nothing in sight save the low meadow grass and an occasional cow grazing.

After the course leaves the cementway

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and comes back to the public highway at Bethpage, there is what has been termed in the past, Manneto Hill, but it is such a slight affair it is hardly worthy the name. The foliage along Round Swamp and Plainview roads is quite thick, and if there is any dangerous part of the course it would be in this section, where the turns are quite frequent and where the view ahead is generally of short range. For the most part the racing cars will be tearing through either a beating sun or rain, as the day may happen to afford. The only shade is along Jericho turnpike where the trees are quite tall and in parts extremely beautiful, sometimes overlapping the roadway.



MAP OF THE VANDERBILT CUP COURSE

Permission to use the public roads was obtained from the board of supervisors of Nassau county at a hearing at Mineola, L. I., on August 3d, when A. R. Pardington, of the Vanderbilt Cup Commission, appeared and gave a statement as to the measures that had been taken both to protect the interests of the county and to safeguard the public. Several prominent residents of the county appeared to recommend that the board grant the necessary permission and no opposition was presented except by one resident of Westbury, whose objections proved unavailing. Accordingly the counsel for the board was instructed to draw up the regulations and bonds by which the county will be held exempt from damages and to assure a satisfactory recompense for such repair expense as the race may cause in connection with the roads.

The entries for the race close September 1, and already a number have been received. The elimination race for the American cars will be held on October 10, and Pardington promises that the Parkway section will all be completed by that time. There are a number of contractors on the work and their sections are so short that it will be an easy matter for them to finish in the time allotted. All of the crushed stone and the cement that is to be used on the job is on the ground, together with the steel netting which forms the foundation for the cement roadbed. The wire fencing has been contracted for and is almost ready for delivery. This fencing will be about five feet high and composed of ten parallel wires set close together and held in position by vertical wires about a foot apart. Work on the steel span at Central Park and the cement bridges in the section is being pushed rapidly, and three toll lodges will be completed in time for the race. Because of the military guard and the fact that all four sides of the course are much more isolated than in previous races, it is thought that there will be no trouble in controlling the spectators.

American Thomas Car Reaches Paris.

Escorted by a great parade of automobiles the American Thomas car, carrying George Shuster, George Miller, Captain Hans Hanson, and George McAdam, arrived at the office of Le Matin in Paris at 8 p. m., on Thursday, 30th ult., the second of the New York to Paris "racers" to reach the French capital, but, by virtue of its allowance of 30 days against the German Protos car, the winner of the contest. The Protos, as already announced in the Motor World, arrived in Paris on July 26th.

The escort for the Americans drove out 25 miles to Meaux to meet them, and the entry into Paris was a triumphal progress, the gay crowds along the brilliantly lighted boulevards shouting "Vive le car Americain!" There was just one incident that jarred, but it resolved itself into an amusing feature of the parade. When the American car with its dust covered khaki clad crew reached the Place de l'Opera and was in front of the Cafe de la Paix, it was stopped by a gendarme.

"You are under arrest," he declared. "You have no lights on your car."

A crowd of Americans rushed from the cafe and explained the situation to the officer, telling him that the machine was finishing the New York to Paris race, while Shuster declared that the lamps had been broken on the journey, but no explanation moved him. A man on a bicycle came forward and offered his lantern to the crew, but it could not be detached from the machine. Finally the bicycle was lifted bodily onto the front seat of the automobile and placed between Shuster and Miller while the owner climbed into the rear seat and the car was allowed to proceed.

Formal award of the prizes will be made toward the end of the current week, it is expected. The committee on the contest are to hold a meeting for that purpose and no doubt is entertained that they will award first honors to the Thomas car. The Berliner Zeitung am Mittag, however, has filed a protest against the award of anything but the first prize to Lieut. Koeppen of the German Protos car. That paper, which holds that the handicap placed on the Protos was unsportsmanlike, declares that the Imperial German Automobile Club fully shares its view of the situation, and will probably address formal representations to the committee in its own name. The Zeitung also requests the German press to take up the question and join in the protest because the "matter has a certain national importance."

City Wants Two More Automobiles.

New York City again is in the market for two automobiles. The cars are for use in the department of docks and ferries, and the sealed bids were opened on Tuesday last, 4th inst. This is the second time that this department has advertised for cars this year. On the last occasion, in April, the bids were thrown out as the lowest offer was $7,500 for the two machines. The present competition resulted in a bid of $6,490. The contract has not yet been awarded.

The specifications call for two new 4 cylinder water-cooled cars. The interesting features of the specifications are found in the elimination of the phrase, "American make," and that the body may be of "steel casting" construction. While chrome steel is called for in the axles and crank shaft, and its composition is specified, the clause which formerly read "each bidder shall submit with his bid a guaranteed manufacturer's analysis and test of the steel used for the above named purpose," has been altered so that now it stands, "the successful bidder shall submit with his bill a guaranteed," etc. The cars need not be of the 1908 model.

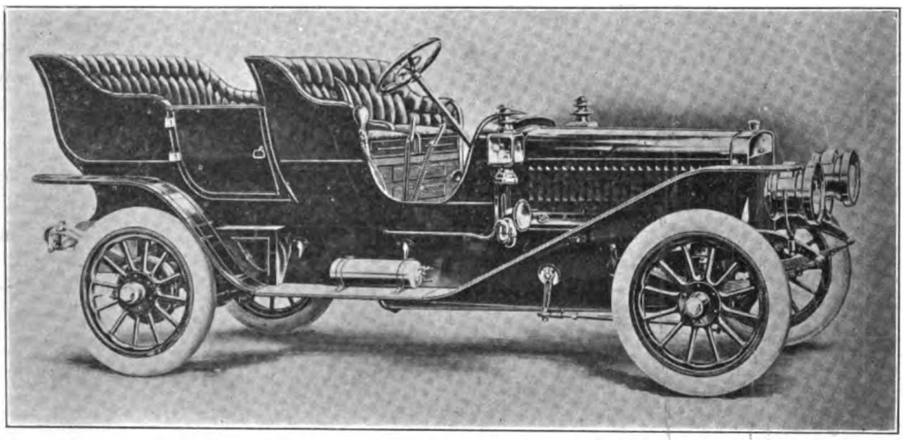
The bids received were from Cordner & Flinn, who offered two Acmes for $6,490; The American Locomotive Co. with Berliets at $7,000, and Homan & Schulz with Nationals at $7,400.

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SIX-TEEN-SIX AND ITS SISTER

New Winton Model to be of Increased Power—Only Minor Changes to Appear in Its Predecessor.

Following the all-six-cylinder policy adopted last year, the Winton Motor Carriage Co., Cleveland, Ohio, has decided upon an extension of its line. Two distinct models are to be manufactured hereafter,



WINTON SIX-CYLINDER, 48 H. P.

both to be known as the Winton Six. One, which will be practically a continuation of the Six-Teen-Six model, will be rated at 48 horsepower, and will be equipped with a five-passenger body. The other will be of 60 horsepower output, and will carry a seven-passenger body. Deliveries on both models will begin shortly.

In general design no changes have been made. The cylinders are offset, and cast in pairs. The valves are of the two-piece variety and are mounted on the right side of the motor. The valve tappets, springs, and plungers are enclosed in housings covered with detachable pressed steel plates. No moving part of the motor is exposed except the fly wheel. The starting device is continued without change. Compressed air, stored in a tank from the front cylinder, is admitted to each of the cylinders in rotation through a rotary distributing valve, which is the only moving part of the system. The air, admitted during the firing stroke, exerts sufficient pressure to drive the pistons down past the point of ignition and assists the crank shaft until the regular impulses are established. In order to throw the device into action it is necessary merely to press a button mounted on the dash.

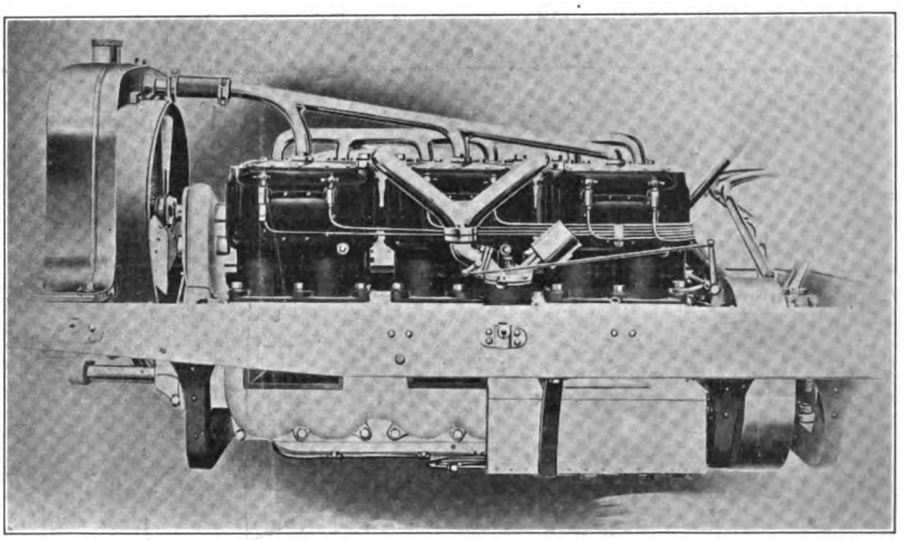
The carburetter has two nozzles and two throttles, interconnected in such a way as to open progressively, the smaller opening first, and later picking up the other automatically. The float is arranged concentric with the aspirating nozzle, and the mixture is compensated automatically without the use of moving parts. Double ignition is employed, the regular system being the Eisemann high tension magneto with distributor, single non-vibrating coil and plugs located horizontally over the intake valves. Accumulators also are provided for use in starting the motor and as a standby.

Lubrication is carried out in much the same manner as on the Six-Teen-Six model, but in simplified form, in that one pump now serves in place of twelve. The crank shaft main bearings, and the two-to-one gears are fed directly by a pump operated by an eccentric on the rear end of the crank shaft. A second pump, operated by the same eccentric, draws the oil drainage from the crank case and returns it to the tank, whence it again passes through the system after being properly filtered. The water circulation is secured by means of a gear driven centrifugal pump, the radiator being of the vertical tube pattern hitherto employed.

The transmission system differs in the two models in that that used in the 48 horsepower car affords three changes of speed in the forward direction, while the larger car has a four-speed gearset. The master clutch is of the multiple disc type, and has 67 relatively small steel units, 33 of which are mounted on the transmission shaft, and 34 coupled to the transmission spiders, which are connected to the fly wheel. The object of this is to place the group having the least inertia on the part affording the greatest variations in velocity. Six springs, equally spaced about the device serve to effect an even distribution of tension on the plates. As is customarily the case, the clutch pedal and brake lever are interconnected, but the clutch is so arranged that it cannot be locked out of engagement.

The change gear group is of the selective type, mounted on annular ball bearings and affords the usual direct through drive on the third speed, through an external and internal gear combination. By means of a safety mechanism, it is made possible to slip into neutral position without disengaging the clutch, but impossible to enter either of the gears again until the clutch is released.

The propeller shaft is coupled by means of roller type cardan joints, the flexible connection between the motor and change gear consisting of a split bushing which engages the squared end of the main transmission shaft and a similar squared end on the fly wheel. The entire mechanism is completely housed.



MOTOR OF WINTON 48 H. P. SIX-CYLINDER CAR

The rear axle is of the full floating type, mounted on Timken roller bearings the load-carrying axle tube being of heavy drawn steel tubing. The differential or balance gear is of the spur pattern. Four brakes are mounted on the driving wheel hubs, and are operated through equalizers. They are of the external-internal pattern, and have large areas. No brake attachment is carried on the transmission proper.

The frame side rails and drop sections which carry the sub-frame are of one-piece channel section steel, with heavy gusset plates, and the power plant is entirely supported by the sub frame. Suspension is, as

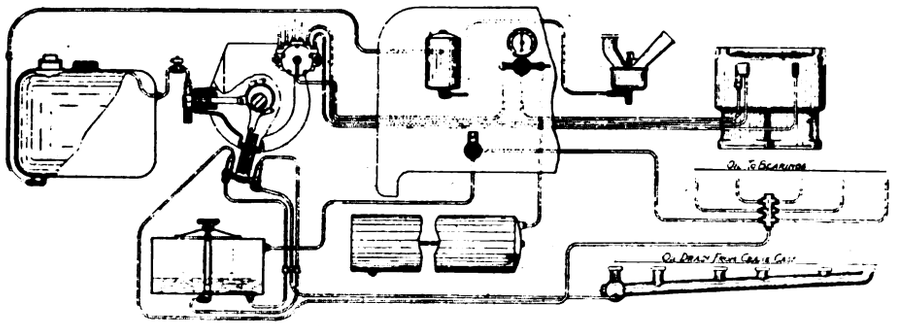
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hitherto, by means of the Winton twin ersspring equipment, to which shock absorbers have now been added as a part of the regular equipment. The torsion and radius rod groups are as in the equipment of the present model.

The wheels are: for the 48 horsepower model, 34 inches in diameter, with 12 spokes; for the 60 horsepower car, 36 inches in diameter. All wheels run on Timken roller bearings, this applying to both models and the regular tire equipment specifies the 4½ inch size, quick detachable type.

The main gasolene tank is suspended from the rear of the chassis and is of 22 gallon capacity. Three gallons are contained in a reserve compartment isolated from the main body of fuel. The feed is by pressure to an auxiliary tank, mounted on the dash board, from which it is led by gravity to the carburetter.

All bodies are of wood, constructed after special constructional designs. Mahogany



WINTON SELF-STARTER AND OIL PIPING

dashes are employed, with steel hoods. The bonnets are of aluminum. A steel dust pan extends from the forward end of the motor to the rear of the transmission, making, with the apron, which extends from the radiator to the motor, a complete enclosure for the under side of the car.

Multiplicity of piping and other connections being a common fault in many cars, it is interesting to observe the relative simplicity of the equipment employed on the machines in question. As shown by the accompanying illustration, the air tank for supplying the self-starter is located immediately at the right of the oil tank, with a line leading to the push button and gauge on the dash. The small tank shown on the dash, is the auxiliary gasolene reservoir. The carburetter is shown at the right of the dash. From the first cylinder, two pipes lead, one for receiving pressure to be stored in the air tank; the other pipe is similar to that which leads to each of the six cylinders to distribute air to the cylinders from the supply tank through the distributor valve. Oil leads to bearings and oil drain from crank case are shown at the lower right hand side. The starting crank, which is useful only for emergency purposes and repair service in overhauling the motor, is carried in the tool box. The foot button on the dash takes its place under ordinary circumstances.

POINTS ON SELECTING LUBICANTS

Some Fallacies Concerning Oils That Mislead the Average User—An Expert Offers Suggestions.

Few motorists realize the importance of proper lubrication and the havoc which is wrought by using an inferior lubricant. Many buyers are influenced by the matter of price, without considering quality, or are guided by the advice of a man who is interested in selling the goods on which he makes the greatest profit, says H. E. Haws, manufacturer of Panhard oil. He continues:

Unfortunately much oil is sold in barrel or half-barrel lots, and the dealer's word is practically the only assurance the consumer has that he gets what he pays for. Most of the leading brands of cylinder oils retail at approximately the same price, but of late there has been a flood of cheaper oils, and the car owner is the one that gets the worst of it.

Much has been written recently as to substitution and the tests which a satisfactory cylinder oil should stand. Some of this has entirely missed the point. The tests for the flash point, gravity and viscosity, while interesting to the practical chemist, are unnecessary as far as the motorist himself is concerned. The manufacturer of the several standard grades on the market would be glad to furnish these tests on application.

The determination of the amount of free tarry matter in the oil is the real factor which governs the amount of carbonization to be expected. The catch phrase, "Color Test for Carbon," has even been adopted by some manufacturers, meaning that lightness of color indicates freedom from carbon.

This plausible argument, convincing to the unskilled user, has arisen from the misinterpretation of the word "light" as applied to oils. While it is true that lightness of gravity is of the greatest importance, it is also undeniably true that lightness of gravity and lightness of color are not necessarily correlative.

An almost white oil may be of a much heavier gravity and contain more free carbon than another oil many shades darker in color. Excessive filtration, while removing the color, may, if carried to excess, remove the lubricating properties of the oil, while bleaching with acid, though having no effect on the lubricating qualities of the oil, may leave an acid residue, injurious to cylinders and pistons.

The consumer should therefore be guided by the reputation of the manufacturer, and not be influenced by a few cents a gallon saved, which may mean many dollars spent later for repairs.

It often occurs that a car owner will condemn a certain brand of oil which another motorist finds entirely satisfactory. This is because different motors require different grades of oil.

Weakness of the Expanding Clutch.

While in many respects the positively actuated internal expanding clutch is superior to either the leather faced cone or the multiple disc types, its chief point of weakness is in the number of small parts involved in its makeup. It is necessary that these shall be properly adjusted to one another, and kept amply lubricated at all times, regardless of the fact that the centrifugal force generated tends to throw out any liquid lubricant which may be applied to it. While many devices of this type are highly successful, the fact that they require greater care in order to produce equally good results with those of the other two types, is more or less of a drawback to their use. It is necessary with a device of this sort, to see that the moving parts are properly adjusted at all times and the adjustments secured against lost motion and working back. From the standpoint of the designer, this type presents far more serious difficulties than any other, since it is more complicated, though not necessarily composed of a greater number of parts.

Evil of Over Long Split Pins.

There is a deplorable tendency among manufacturers to use split pins which are of much greater length than is absolutely necessary for the work to which they are assigned. It is only required that the open end of the pin shall protrude from the part to be locked just a sufficient distance for the ends to be slightly parted. When the ends are long enough to be literally wrapped around the part, the tendency is for them to be weakened from repeated flexure and to break short off, leaving the pin free to work back through its hole. Besides, the extended ends are a menace to the flesh.

Binding Screws that Need Watching.

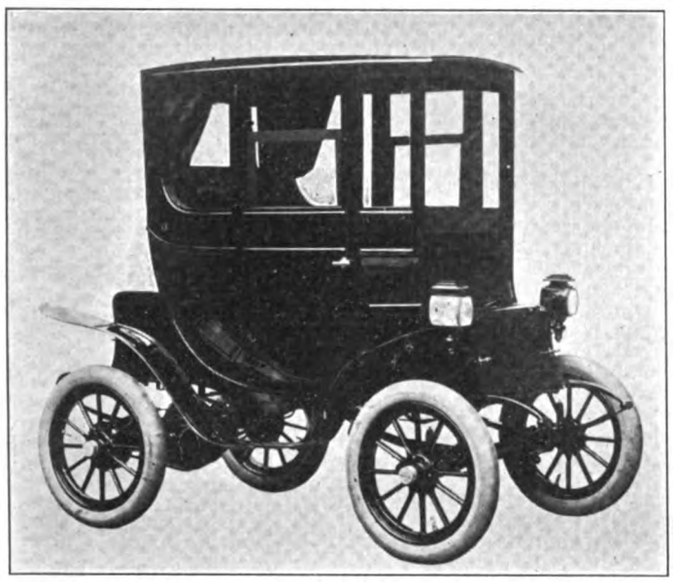
Magnetos which are designed to be readily detached must be watched to see that the binding screws do not become loose. Should this occur there is great danger of the gears becoming sufficiently out of mesh to permit of their climbing, which in a very short time will result in stripping the teeth.

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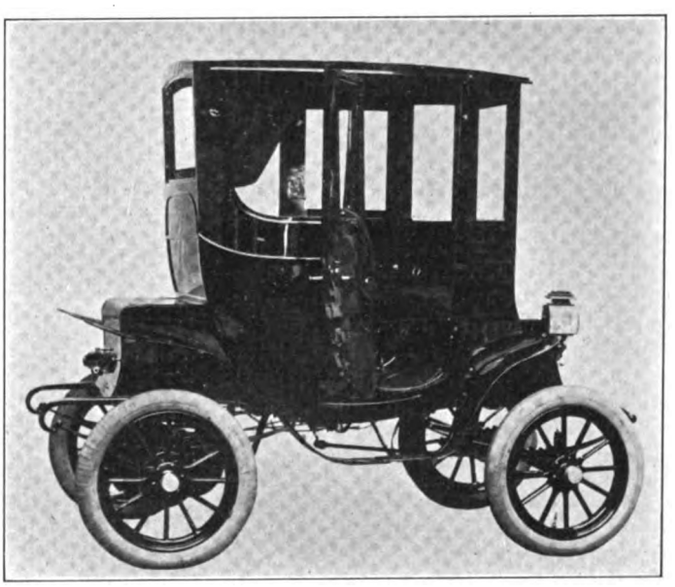
FOUR PASSENGER ELECTRIC COUPE

Waverly Branch of Pope Motor Car Co. Brings Out New Model—Its Convertibility a Feature.

In the convenience of the electric vehicle is found ample reason for its extensive use in and about cities. Realizing this, the makers of these machines are continually striving to produce new models which are useful and comfortable above all else. Particularly well suited to the purposes of the town car are the closed vehicles, an instance typical of this being found in the case of the new four-passenger coupe, which the Waverly branch of the Pope Motor Car Co. has just produced.



POPE-WAVERLY FOUR-PASSENGER COUPE



VIEW SHOWING SEATING ARRANGEMENT

This vehicle has the outward aspect of the familiar light, two-passenger coupe, except that the fore part of the body is designed more after the fashion of the extension brougham. By this means, space is secured for an extra seat affording room for two additional passengers, who sit facing the driver. The interior is, in fact, practically the same as that of a horse-drawn brougham, except for the steering lever and controlling devices, and is equally as roomy. For runabout, theatre and shopping as well as general runabout service, it is the equivalent of an electric cab minus the driver. As it is scarcely more cumbersome than the two-passenger coupe, it serves as well for two or four-passenger service. Being essentially a sociable affair also, it is admirably adapted to what is known in carriage parlance as "general family service."

A pleasing variety is made possible by the fact that the top is demountable. When removed, the effect of an open victoria is secured, which, for warm weather uses, may be enclosed by a full leather top if desired. In either case, there is nothing suggestive of a concerted body, either in ungainliness or awkward protruding fittings. The accompanying illustrations show its appearance with the full wood top, both externally and internally.

Its specifications include single motor, of special design and double overload capacity; "herring bone" gearing and 30-cell, 11-plate battery, of 10 and 20 cell groups, arranged in the front and rear compartments. There are two foot and one electric brakes, side steering lever, and a combined voltmeter and ammeter, for indicating the condition of the charge. The body sill is dropped in the center, giving a lower center of gravity and easier entrance than the straight sill type, the length being 89 inches, and the inside seat width 44 inches. The wheel base is 68 inches, and the tread 54 inches.

Double Drive for Extra Speedometer.

To save the nuisance of having to peer over the shoulders of the driver in order to catch a glimpse of the speedometer which is mounted on the dashboard, it is convenient to have a second instrument mounted in the tonneau. For this purpose at least one maker is marketing a special form of double drive whereby the installation can be made readily. It is possible to employ the principle without using this device, however, by using two independent instruments, one driven from either of the front wheels. In this case, the readings of the two will be found to form an interesting check upon one another.

Why the Lamp Sometimes Smokes.

Motorists frequently experience no little difficulty from the smoking of oil lamps when first lighted—regardless of care taken not to have the wick too high when igniting it. The difficulty arises through a variation in the rates of feed when the lamp is hot and cold. As the burner gradually becomes heated, the oil volatilizes more rapidly than before, possibly becoming somewhat thinner as well, so that a larger flame is developed, even without altering the position of the wick. If the height of the wick is readjusted some minutes after lighting, and before the car is started, there should be no trouble from this source. Care in this respect is important, because a smoky lamp practically eclipses itself.

Wiring Diagram on the Car.

Every car owner should be sufficiently familiar with the construction of his machine to be able to reach any part in an emergency with the least possible loss of time and labor. Frequently there are several long ways and only one short way of getting at an enclosed part. The owner should know how to go about his repairs in the most systematic and time saving manner. As a ready reference in time of need and a handy reminder when overhauling the mechanism, it has been recommended frequently that a wiring diagram be carried permanently mounted on some part of the machine. This is well enough as far as it goes, but it should be supplemented by a diagram of the layout of all oil and fuel piping.

Necessity for Tight Pipe Connections.

It is absolutely necessary that the pipe connections between the bottom of the radiator and the pump be kept perfectly tight. Otherwise whatever leakage exists will result in the introduction of small amounts of air into the cooling system, which may cause air locks and so a complete stoppage of flow. Generally speaking, such leaks will only be manifest when the motor is at rest, as the suction is sufficient to hold back the water when it is running.

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RIGHTS IN UNPATENTED DESIGNS

Appeals Court Declares Imitation of Rushmore Lamps Illegal—Views as to Unfair Competition.

In the manufacture of automobile lamps, as well as in the field of other motor car accessories, there has for some time been a very delicate situation because of the similarity in design which the products of various makers bear to each other, and a decision rendered in the United States Circuit Court of Appeals, in New York in the litigation of the Rushmore Dynamo Works, of Plainfield, N. J., against the Manhattan Screw & Stamping Works, of New York, is illuminating as making clear the legal idea of how far imitation may be restrained when the article imitated is in some of its features not covered by design patents and the restraint is sought on the grounds of unfair competition.

An order was granted in the district court for a preliminary injunction against the Manhattan Screw & Stamping Works, preventing the latter from making lamps resembling the Rushmore "flare front" design and from using the words "flare front" themselves. An appeal from this order was taken by the defendants, with the result that the words "flare front" in lamp description were decided as being not subject to the exclusive use of the Rushmore Dynamo Works, but maintaining the latter company's contentions as to the exclusive right to the "flare front" design which it has made popular. That there are limits to the "unfair competition" argument to restrain competition, however, is plainly indicated by the decision on the appeal, which is as follows:

Before Coxe and Noyes, Circuit Judges and Adams, District Judge.

On appeal from an order granting a preliminary injunction enjoining the defendant; its officers, employes and agents "Not to manufacture, sell or use, exhibit or advertise any automobile lamp or lamps having enclosing cases or shells made in imitation of or resembling, or a colorable variation of, the Rushmore 'Flare Front' search light lamp exhibited to this Court herein and of which a sample has been offered marked 'Exhibit A,' except in so far as such lamps may be the genuine lamps made by complainant, and not to use in connection with any lamp made in imitation of or resembling or a colorable variation of said 'Exhibit A' Rushmore Lamp, the words 'Flare Front' and not to print or publish or have printed or published in catalogues or advertisements or elsewhere, any cut or representation of any lamp in imitation of or similar to said 'Exhibit A' Rushmore Lamp, and not to print or publish in any catalogue or advertisement or elsewhere the words 'Flare Front,' or similar words in connection with the representation of any lamp made in imitation of or similar to said 'Exhibit A' lamp, except in so far as such representation and such words may be used to advertise or in connection with genuine Rushmore lamps made by the complainant."

Hans V. Briesen, for Defendant-Appellant. Alfred Wilkinson, for Complainant-Appellee.

Coxe, J.

In December, 1905, the complainant adopted a design for the shell of an automobile lamp and in the following January exhibited it at the exhibition of automobiles at Madison Square Garden, New York. This is the complainant's lamp in controversy. Its exterior is pleasing to the eye and it is unquestionably a high grade lamp, but there is nothing strikingly novel or ornamental about it. In general contour it resembles the search-light which has for years been in use upon excursion boats and vessels of war, the principal difference being in the addition, by the complainant, of the so-called "flare front," the glass front of the lamp being larger in diameter than the body of the lamp except as it flares out near the front to meet and inclose the glass. No patent has been granted to Rushmore either for a combination, for a new article of manufacture or for a design for the shell of the lamp. It is possible that had application been made a design patent might have been granted and sustained.

In West Disinfecting Co. vs. Frank, 79 C. C. A. 359, this court recently held valid a design patent for a somewhat similar structure.

The defendant is manufacturing a lamp which, though differing in several details of construction, unquestionably resembles in external appearance the Rushmore lamp. If a valid design patent has been issued to the complainant we have no doubt that the defendant's of difference are unimportant, we will consider the question involved r - on the theory that the shells of the two lamps are substantially identical.

The defendant has adopted "Phoebus" as its trade mark and its lamp is known to the trade as the Phoebus lamp. All of its lamps have conspicuously disolayed on the top thereof a name plate with a black background inscribed "Phoebus, the lamp of Quality, Model 601, Manhattan Screw & Stamping Works, N. Y." The officers of the defendant deny that they, or any one connected with the defendant, have ever in any way represented their lamps as those of the complainant. There are allegations in the bill, made upon information and belief, that the defendant has palmed off its lamps upon innocent purchasers as the Rushmore lamps, but there is nothing in the affidavits worthy of the name of evidence to establish these allegations. The affidavits, in our judgment, also fail to establish an exclusive right to the use of the name "Flare Front." The complainant savs in his affidavit, "I am aware that what might be called 'flaring fronts' have been used on other forms of lamps entirely different in appearance from my Exhibit A lamp, for instance the old carriage lamps, but I am positive that I am the first who has ever used these flare fronts on any lamp similar in appearance to my Exhibit A." Assuming the correctness of this statement we do not think the fact that complainant was the first to put a flaring front on a shell of his design entitles him to a monopoly of these words. We regard them as descriptive merely and are of the opinion that an injunction should not issue at least until proof, more cogent than anything which now appears in the record, is presented, showing that they have acquired a secondary meaning.

So far then as the prayer for an injunction is based upon the use of the name "flare front" and the allegation that the defendant has actually deceived purchasers by representing that its lamps were made by the complainant, the most that can be said is that the questions are involved in doubt. This court has uniformly held that an injunction should not issue in a doubtful case.

Hall Signal Co. vs. Railway Signal Co. 153 Fed. 907.

Cleveland Foundry Co. vs. Silver, 134 Fed. 591.

Hildreth vs. Norton, decided Feb. 11, 1908.

As we read the opinion of the judge of the Circuit Court he finds no actual fraud and no evidence that the defendant is now using the word "flare front." He says:

"Assuming that at the present time the defendant is not using the word 'flare front,' is not selling its product as Rushmore lamps, and is not using in any way either of these words or phrases, the question is whether plaintiff is entitled to be protected from unnecessary imitation of non-functional parts of his well known lamp. It seems to me that under the cases of Enterprise Manufacturing Co. vs. Landers, 131 Fed. Rep., 240, and Marvel Co. vs. Pearl, 133 Fed Rep., 160, he is so entitled."

We are thus confronted with the naked question of law—can one who manufactures and sells a well known article of commerce, like an automobile search light, inclosed in a shell of graceful, but unpatented design, maintain a bill for an injunction, profits and damages against a defendant who sells automobile search lights inclosed in a similar shell, with his name prominently appearing thereon as the maker, and who has never represented that his lamps were made by the complainant?

We feel constrained to answer this question in the affirmative upon the authority of Enterprise Co. vs. Landers, supra, and Yale & Towne Mfg. Co. vs. Alder, 154 Fed., 37. Both of these cases were decided by this court and we see no way to distinguish them, on principle, from the case at bar. We are of the opinion, however, that to answer this question in favor of the complainant carries the doctrine of unfair competition to its utmost limit.

If it be pushed much farther those engaged in trade will be encouraged to run to the courts with trivial complaints over the petty details of business and thus will grow up a judicial paternalism which in time may become intolerable.

This cause or onei nvolving the question at issue may be easily brought here on appeal from the final decree and heard at the next term. After the witnesses have been cross-examined we may be able to tell with much greater certainty whether the competition of which the complainant complains is produced by the similarity of the shells of the two devices or by the fact that defendant is selling its lamps at a much lower price.

It appears from the record that purchasers of automobiles belong to the wealthy class, who are not particular about the price paid so long as they secure durable and efficient machines. They are not the class of buyers who might purchase a padlock, for instance, after a casual inspection and it is not easy to understand how such fastidious buyers with the Phoebus name plate before them can be deceived into thinking that they are purchasing the Rushmore lamp.

If it should appear, after full hearing, that the effect of the injunction will be to stifle legitimate competition rather than to punish unfair competition we will not hestitate to dissolve it, but upon the affidavits now before us, the majority of the court is of the opinion that the case is controlled by the former decisions of this court.

The order should be modified by excluding from its provisions the prohibition against the use of the name "flare front" and, as so modified, is affirmed.

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STODDARD-DAYTON ENTERTAINS

Many Pleasures Provided at Second Annual Convention of Agents—Matters of Mutual Interest Discussed.

Agents' conventions, which occur with increasing frequency from year to year, may be said to have the uniform purpose of familiarizing the selling organizations of the various manufacturers with the details of the products and selling plans of the coming year and of unifying the efforts of the various salesmen and directing them into the most efficient channels. In this respect all such meetings closely resemble one another. In detail method they differ according to the scope and efficiency of the companies holding them. As illustrative of the usefulness of these gatherings, which usually receive such curt notice from the press, and also as casting an interesting side light on the rapid growth of a concern which is very much alive to the possibilities of the automobile business, it is useful to record the doings of the second annual convention of the Stoddard-Dayton agents, held at the Ohio home of the Dayton Motor Car Co., and the cash register

Wednesday, Thursday and Friday of last week, 29th to 31st ult., were the days set apart for the formal proceedings. The program actually commenced on the preceeding Tuesday evening, when the public of Dayton was invited to view the setting of the forthcoming convention—and accepted in goodly numbers.

Primarily, this setting was an individual automobile show. The 1909 models—some 16 varieties, embodying various methods of mounting the five styles of chassis which compose the full line for next year—were shown in completed condition on the sixth floor of the new wing of the factory. Not only this, but the accessory adjunct which forms so important a part of every well ordered show, was well stocked with samples of the fittings and equipment which are to go on the new cars regularly, as well as some that might be included at the option of the purchaser. By way of rounding out the exhibit there were structural parts of the cars by the score. A sectional working model of the valve-in-the-head motor adopted last year, crank shafts and connecting rods in various stages of completion, even the dies and jigs by which they are formed, and various other parts and materials in raw and complete stages, served to make complete the display.

While full information as to the new models will not be forthcoming for a few days, it is possible to state that they will be known as: "A," "F," "K," "C," and "H," each distinguished by the prefix "9," to indicate the year of production. The first and the last two will be entirely new cars; the others improved forms of previous models. A striking point in this connection is that the design and construction of the cars will be strictly uniform. That is to say, practically three sizes of the same car will be produced, no difference in design, method or materials of construction other than such as may be determined by differences in power and weight being present. Thus the prospective buyer is to be offered the Stoddard-Dayton car. After examination he may choose the size best suited to his purse and fancy. For the man of moderate requirements there will be a wonderfully attractive little offering at a price to match. To make the line complete, a good variety of bodies also has been developed, bringing out a number of demountable combinations, and among them that promising idea the "baby tonneau."

It was on the same floor with this display that the formal sessions of the convention were held. Here, in the presence of chart and blackboard "first aid" to the imagination were demonstrated the ideals upon which the present designs are founded. Here, also, occurred the usual discussions incident to purely "family reunions" such as pertain to the successful handling of competition, the fine points of marketing, prices, talking points, territorial boundaries, and the ever fruitful topics of equipment and accessories.

In these discussions unusual pains were taken to obtain an expression of opinion from all the agents as to the proper decision of such questions. It did not follow, as was explained, that the opinion of the majority would directly govern the policy of the company in laying its plans for the future, but it was given to understand that such considerations would weigh heavily in all determinations directly affecting the matter of sales.

In thus getting into closest touch with the ideas of the selling forces the real convention spirit was brought out in a way not possible where, as is sometimes the case, the manufacturer preserves the attitude of instructor only, and treats the criticism of the agents in the same spirit as their requests for instruction. Indeed, the spirit of co-operation here emphasized was manifest to a surprising degree throughout the entire meeting. Its outward indication is evidenced in the loyal attitude of agents and factory employes alike.

President C. G. Stoddard touched upon this spirit of loyalty at the banquet when he said that without the intense feeling of personal responsibility and fidelity to the company as shown to a striking degree by the forces at home and in the field, the rapid progress of the concern would have been an absolute impossibility

The banquet, which was tendered on Thursday evening at the Dayton Club, brought more than one forcible tribute to the unity of purpose which has been instrumental in building up in a quiet way a force which is very much to be reckoned with in the present stages of the industry. The ideal method of building an organization worthy of emulation was crystalized by R. T. Houk, of the factory force, who pointed to the fact that an organization can be complete only when every member realizes the importance of the particular duty assigned to him — no matter how insignificant it may appear—and is willing, even eager, to do his best to carry it on. Nor can an organization be complete when its leaders hesitate about ridding themselves of assistants who are not fully competent to carry on their tasks.

"The fact that a man is bad only in spots," he said, "ought not to justify his being retained for further trial or for use in a new position—an egg which is not fit to boil, don't do to scramble. It is all too easy to make excuses for retaining a man who is half good; he is a good fellow, he tries so hard, he is willing, or maybe he is handicapped in some manner beyond his control —but that is not perfection. And the perfect whole is composed of only perfect units. This is a relentless principle."

Another important point was brought out by E. R. Blaine, of the Blaine-Thompson Co., Cincinnati, who spoke of team work in advertising. "Here is a national broadside of magazine advertising," he said, "directed toward the general publicity of the product. It is destined to benefit the entire organization to an almost equal degree. But the agent who permits it to go by without grasping the opportunity of advertising himself locally as the representative of the company is missing a golden opportunity. The effect of this general work is entirely lost in his section unless the local man takes it upon himself to identify himself with the product. There must be team work among these widely scattered forces or half the effort will go for naught."

The convention was attended by three score and more of the regularly constituted agents of the company to whom were added a goodly number of invited guests, newspaper men and others who were provided with ample entertainment and a cordial welcome at the factory. Here it was plainly to be seen that the new cars constituting the "show" were neither dummies nor hastily completed models. From the stacks of assembled groups on the erecting floor clear down the line to the foundry every hand was busy with the 1909 product, already well on in the making.

Live "Ads" at British Race Meets.

Sharp rivalry in British trade circles has called forth various advertising dodges, some of them ingenious, some following out lines which have been found successful in other sorts of business. One firm of tire makers has lately resorted to the use of "sandwich men," a corps of whom parade about at race meets and other sporting events, each carrying the usual placard, in addition to which a tire casing is slung around his neck.

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MILITARY VALUE OF AUTOMOBILES

General Grant Gives His Views to the Motor World—Some Inside History Explains Pine Camp Reports.

That automobiles are not only practicable for the needs of the army, but that their use adds greatly to the efficiency of fighting bodies, is the assertion of Major General Grant, who commanded the regulars and State troops at the recent manoeuvers in Pine Camp, New York. Incidentally General Grant refuted the statements that have appeared in the daily press to the effect that automobiles were not practicable for army purposes. When interviewed by a Motor World representative on the subject of automobiles for army purposes, the General said:

"The automobile is a necessary adjunct to the equipment of an army. Its uses are manifold in this connection, but its main and distinctive value lies in the fact that by its use a commanding general can keep in personal touch with his entire troops, which is not alone desirable, but necessary, since he must have absolute and accurate knowledge of all conditions as they exist among the bodies under his command.

"In the wars which have occurred up to this time, the man on whom rested the responsibility for the success or failure of a battle, largely was dependent on the reports of conditions brought to him by his subordinates. An army or an army corps on the field of battle, occupies an immense territory, they are spread over a large area and the outposts are many miles apart. The only way that one man could himself observe the different positions of his troops and the relation of these positions to each other, prior to the development of motor cars, was by riding about on horseback. This mode of traveling not only exhausted the vitality of the rider, but made necessary a more or less elaborate system of relay horses, and even under these conditions, the journey would occupy more time than, at a critical moment, should be given to such an inspection by a general whose responsibilities and duties are necessarily enormous. Incidental to this there also existed the drawback of the troops altering their positions during the two or three days that would be required to make such an inspection on horseback.

"But the automobile changes all this. In ten hours, even though the roads were in but fair condition, a distance of two hundred miles easily could be traversed. True it is that such a trip would be hard both on man and machine, but hardships are the main part of warfare, and where the disagreeable part is mitigated by the possibility of riding on soft cushions, shielded from the direct rays of a blood heating sun, or protected from a drenching downpour of rain, such a trip could be undertaken and accomplished and the results of it would at once become manifest by an increased efficiency of an army owing to its commander having seen the exact situation of his troops. Incidentally the moral effect of a visit from a major general, on subordinate officers and the men of their commands is excellent and tends to increase the feeling of personal responsibility in the man. And this is a keynote of success. In short, the automobile furnishes the means of personal contact between the leaders of an expedition and the men on whom the success of the undertaking depends, and this mutual acquaintanceship is of immense value."

General Grant then was asked his opinion of the value, for army purposes, of motor trucks. There was no hesitation in the response which came in the characteristic slow way, a trait of the Grant family.

"The automobile truck cannot successfully compete with the government mule. The much despised, much caricatured army mule is equal to about 50 horsepower in an automobile, when it comes to taking a heavy load up a steep hill over bad roads. I don't want to be quoted," continued the general, "as stating with mathematical precision, or as a result of studied experiments that one mule equals 50 horsepower under the conditions I named, but I mean to illustrate that the mule is a reliable machine of known power when a hard hill climb is to be encountered, and we army men will need a lot of convincing before we will agree that he should give way to a high powered gas engine.

"For ambulance service and for the freighting in connection with the habitation of an army post, the motor vehicle, the light or even heavy truck, is ideal. But at this time I know of no motor truck suitable for the needs of the army on the march or on the battlefield."

Asked about the authenticity of certain adverse reports which have appeared in the newspapers, in regard to the service rendered by motor vehicles in connection with the recent Pine Camp manoeuvers, he said:

"The reports, in a measure, were true, but they failed to state why or under what conditions the machines were not practicable for our use, and I'll tell you the inside history of my automobile experiments in Pine Camp. This is the history which formed the basis of this adverse comment. There was some difficulty with the cars, but about 90 per cent. of it was due to the chauffeurs. The cars were all right, the machinery worked well; and when I was a passenger in the car there was no trouble, no delay, no break, everything was all right. But when I would order the car on the following morning, I would be told that something was out of order. I wondered how accidents could occur while the car was standing idle in its shed, but no one seemed able to tell me, so I concluded that may be this thing they call 'joy riding' was responsible for the trouble. Now 'joy riding' is an easy thing for an army officer to overcome. I merely detailed a sentry with a loaded gun to guard that car. I told him not to let any one touch that machine without an order over my signature. Chauffeur and every one else was barred, and immediately conditions were changed. When I ordered the machine it came. I suffered no delay, no mishap; and only two or three punctures caused a temporary layup. The armed sentinel is an excellent insurance of motor car efficiency."

"What do you think is the best design for army purposes?" asked the interviewer.

"I believe that the most useful car would be one having a light, strong body, designed to carry four people. Such a car would carry, in addition to the chauffeur, the general and two aides-de-camp. The car should be high powered and carry a large quantity of fuel. There should be some arrangement for transporting a little baggage with blankets and other essentials to 'part comfort' if sleep by the roadside became necessary. If possible there should be some devise incorporated in the tires to prevent punctures, even though resiliency of the tires was effected by the introduction of a steel band or some similar contrivance, the added discomfort to the riders would be compensated for by immunity from delays. That is about all that it needed. In Pine Camp I used a seven passenger car, it was very comfortable and very delightful, but it was too luxuriant for military purposes."

"One thing more," said the interviewer, as he prepared to leave, "What about 'the chauffeur question;' would you always have to guard your machines to prevent 'joy riding?' "

"Hardly," said the General, and he smiled. "The machines in Pine Camp were operated by civilians,. My machine was guarded and gave good service; the one used by Colonel Glenn was not guarded and gave less satisfactory results. When the cars are owned by the army they will be operated by men in the service. We now are training men of the engineers' corps to handle automobiles, and I greatly doubt if soldiers will disobey orders with the same nonchalance that civilians disobey them. I think the 'chauffeur problem' would not present insurmountable difficulties."

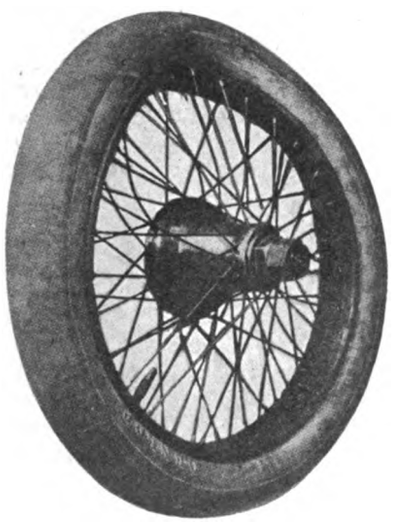
That the General's belief in this solution of the question is well founded, is shown by the results obtained by President Roosevelt, who has for his use two White steamers which the government owns. The drivers of these machines are, or rather were, chauffeurs who were trained by the White Co. These men now are sworn in as members of the secret service and are detailed to operate the machines. The uniform reliability of the cars may be taken as an evidence that they are handled properly and it is safe to say that a secret service man would find it more serious to disobey an order than would a civilian chauffeur.

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RESISTANCE TO SKIDDING STRAINS

Comparative Tests of Wood and Wire Wheels—The Method Employed and the Results Obtained.

Wire wheels, though not in vogue in this country within the past few years, are still employed in England to a considerable extent, one popular mode of application being in the Rudge-Whitworth detachable arrangement, which is the idea of the demountable rim carried to its extreme application. The considerable use of this affair



WIRE WHEEL SHOWING RESULT OF TESTS

has served to keep alive the old controversy as to the relative strengths of wood and wire wheels, a series of tests recently carried out by the makers of the device in question, forming a useful and rather surprising contribution to a subject which has been permitted to languish elsewhere for some little time.

Four wheels were tested, according to the Autocar, from which the accompanying illustrations are reproduced—one R.W. wire and one wood front, and one R.W. wire and one wood back. Both wire wheels were of the defachable variety. The size of the front wheels was 870x90 mm., and of the back wheels 880x120 mm., the tire pressure being about 80 pounds. The weight of a set of four Rudge-Whitmore wheels is 101.4 pounds, and of the four inner hubs is 48.3 pounds, making a total of 149.7 pounds. The weight of a set of four wood wheels is 179.84 pounds.

The apparatus employed, was really a crude form of pendulum impact machine. A pendulum was hung from the ceiling of one of the shops and sustained a weight of about 450 pounds. The wheel to be tested was mounted on a massive steel mandrel turned down at the end to take the wheel hub, and anchored to a solid bed of concrete. The pendulum bob was adjustable for height, so as to bring it opposite the rim flange of the wheel under test. Pulley tackle was used to haul the bob away from the wheel, and was fitted with a simple device for releasing the bob, which swung with great force, over a distance of about 6 feet, up against the wheel.

After each wheel had been tested in this manner, it was again mounted on the mandrel, but with the point which had been struck by the bob at the bottom, so that the blow would be struck at a point diametrically opposite to that at which it was struck in the first test.

The formula used in calculating the



WOOD WHEEL SHOWING RESULT OF TESTS

energy imparted by the bob at each blow was:

$$E = \frac{W}{2R} L (L - 2d),$$

where W = weight in pounds of pendulum bob (about 450 pounds); L = distance in inches between the rim of the wheel and the side of the pendulum bob before being released (about 6 feet); d = distance in inches betwen the rim of the wheel and the side of the pendulum bob when hanging free (about 3 inches); and R = length between point of suspension of pendulum and center of gravity of bob (about 16 feet).

The relative merits of the two wheels to withstand what would be equivalent to violent side-slipping on the road were judged by observation of the effect of each blow, measurement of the permanent deflection at the point of impact, and the amount of energy imparted at each blow. These results are given herewith in tabular form, the results of the first test, i. e., hitting the side of the new wheels, being given first, followed by the results of the second test—hitting the damaged wheel at a point on the same side, but diametrically opposite to the point at which the blows in the first test were struck.

From these tables it will be seen that the energy imparted, in the case of the front wheels, to the wire wheel, although con-

WOOD AND WIRE WHEELS COMPARED

Wood Wheel A. 870 x 90 mm. Front. (First Test). Three Blows.

Distance from Rim to Weight	Energy of Blow in ft. lbs.	Total Permanent Deflection of Rim.	Result of Blow
ft. in		inches	
5 3¼	476	.53	Top spokes parted at hub
5 9⅛	573.1	1.18	Spokes parted more; two bottom spokes split
6 3½	667.6	3.72	Three top and two bottom spokes broke right through Felloe intact.
	1716.7		

R.W. Wire Wheel B. 870 x 90 mm. Front. (First Test). Four Blows.

Distance from Rim to Weight	Energy of Blow in ft. lbs.	Total Permanent Deflection of Rim	Result of Blow
ft. in		inches	
5 3¼	480	.20	Nothing broken.
5 9⅛	575.4	.57	Nothing broken.
6 3½	683.1	1.50	Four spokes sheared near hub
6 9¼	798.2	3.50	Two more spokes sheared at head, and one pulled through rim
	2537.0		

Wood Wheel C. 880 x 120 mm. Rear. (First Test). Four Blows.

Distance from Rim to Weight	Energy of Blow in ft. lbs.	Total Permanent Deflection of Rim.	Result of Blow
ft. in.		inches	
5 1½	478.5	.30	Nothing broken.
5 8½	591	.63	Three top spokes cracked.
6 2½	700.3	1.09	Four top spokes (in all) broke nearly through.
6 10	843	7.29	Wheel smashed, felloe split all the way round. See photograph.
	2612.8		

Wire Wheel D. 880 x 120 mm. Rear (First Test). Four Blows.

Distance from Rim to Weight	Energy of Blow in ft. lbs	Total Permanent Deflection of Rim.	Result of Blow
ft. in.		inches	
5 2⅝	474.6	.23	Nothing broken
5 9¼	579	.52	Nothing broken
6 3½	688.7	1.12	Four outside spokes sheared near hub. Hub end bulged
6 9¼	817	2.37	Seven outside spokes (in all) sheared near hub
	2559.3		

Wood Wheel A. 870 x 90 mm. Front (Second Test), at Point Diametrically Opposite to First.

Distance from Rim to Weight.	Energy of Blow in ft. lbs.	Total Permanent Deflection of Rim.	Result of Blow
ft. in		inches	
5 2½	483.8	2.72	Nothing further broken.
6 8⅜	632.6	6.29	Top spokes cracked nearly through.
6 2½	577.1	over 8in.	Wheel smashed. Felloe intact
	1593.5		

Wire Wheel B. 870 x 90 mm. Front (Second Test), at Point Diametrically Opposite to First.

Distance from Rim to Weight.	Energy of Blow in ft. lbs	Total Permanent Deflection of Rim.	Result of Blow.
ft. in		inches	
5 5⅛	478.8	.95	Nothing further broken
5 9⅝	558	1.75	Two inside spokes sheared near hub
5 4	663.4	2.05	Tyre burst. No further damage done to wheel
	1700.2		

Wood Wheel C. 880 x 120 mm. Rear. (Destroyed during First Test.

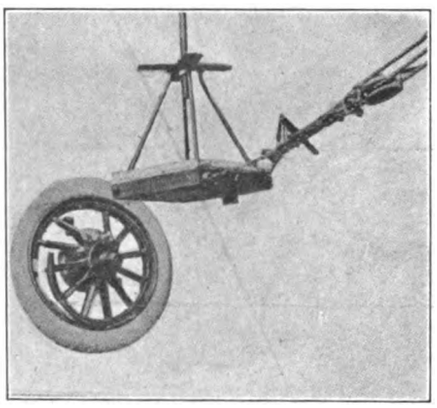
Wire Wheel D. 880 x 120 mm. Rear. (Second Test), at Point Diametrically Opposite to First.

Distance from Rim to Weight	Energy of Blow in ft. lbs.	Total Permanent Deflection of Rim	Result of Blow.
ft. in		inches	
5 2⅞	480.6	.35	Nothing further broken
5 9	579.5	.65	Nothing further broken.
6 3⅛	686.4	1.02	Nothing further broken.
6 9⅝	803.7	1.67	Two inside spokes sheared near hub
7 3½	914.9	2.22	One outside spoke sheared near hub.
	3465.1		

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siderably greater than imparted to the wood wheel, caused a deflection of the wire wheel .16 inch less than in the case of the wood wheel. Although this difference is small, it must be remarked that the damage was much more "local" than in the case of wood wheels, the blow affecting only that part of the rim and spokes in the region of the point of contact of the bob and the spokes diametrically opposite. The damage was chiefly manifested by the spokes breaking away under tension from the heads at the hub, and in a few cases from the nipples at the rim. In only one case did a nipple pull through the rim.

The damage to the wood wheel, on the other hand, spread erratically over the whole wheel, manifesting itself by split felloes, also spokes pulling out of the felloes or breaking across at the dowel in the



THE TESTING APPARATUS.

felloe. These general effects were observed throughout all the tests. It was also observed that the wire wheels gave gradually to the impacts, and did not collapse suddenly, as was the case with the wire wheels. This was most noticeable in the case of wheel C (first test.)

After the second blow it was found that the only damage incurred was four broken spokes. The third blow shattered the wheel, the felloe splitting in two the whole way round and the spokes breaking. This wheel is shown in one of the illustrations. The results of the second test show that the wood wheel was fairly able to withstand blows at a point diametrically opposite the first blows —in fact, better than was expected—but nevertheless it was surpassed by the wire wheel, as is well exemplified in the foregoing tables of the second test, especially in the case of the wheel D (second test), which sustained four normal blows and a final smashing blow of 7 ft. 3 in., with no further damage to the wheel but three more spokes broken. Its wood companion wheel C was destroyed during the first test.

"Summing up it should be obvious that the wire wheel is equally able to beat the wood wheel in the matter of heavy sudden side blows, as in the many other comparative tests which it has undergone in company with wood wheels," says the Autocar. "These tests again serve to show that detachable wire wheels, properly built, are far superior to wood wheels for all-round year use."

To Prevent Bolts from Loosening.

It is a common failing of so-called stove-bolts to become loosened after a comparatively short amount of use in securing wooden and metal parts together, as in the case of the top irons and the metal work of the dash board. The failure is apt to come through the loosening of the conical head in its wooden seating, thus permitting the nut to obtain enough slack to rattle loose on its thread. A simple way of preventing this difficulty is to enlarge the slot across the head of the bolt, cutting the ends pretty deep by the aid of a file, and then bend over a short length of copper wire, which is of just the size to fit nicely in the slot. In this way a couple of ridges are formed on either side of the head, which effectively prevent it from turning so long as a reasonable amount of pressure is brought to bear upon it.

Endurance of the Ball Bearing.

It is commonly conceded that the life of ball bearings, when properly made and used, is far beyond that of the plain type. Just how long a well made bearing of the annular type will last under normal usage is difficult to say—probably longer than any other portion of the car, when applied to automobile mechanism, for instance. An interesting bit of testimony in this connection is supplied by the Hess-Bright Manufacturing Co., Philadelphia, Pa., in regard to the condition of a set of five bearings taken from the transmission of an automobile maker's demonstrating car. After more than 50.000 miles of service, the bearings were returned to their makers for examination. Only two were in a condition to indicate the advisability of refilling them with slightly larger balls, the other three appearing to be about as good as new.

Slamming the Tonneau Doors.

One of the errors to which nearly all automobile users are addicted is the slamming of tonneau doors. Probably the habit comes from the accepted practice of slamming the doors of broughams and other horse drawn vehicles which are so constructed that it does not injure them. With the ordinary type of touring car body, however, the door frames are not braced with sufficient solidity to withstand successfully the effects of repeated shocks from the door. As a result the frames of many bodies become loosened before their time. It is a good rule for the car, as for the house, that attention be paid to the injunction, "don't slam the door."

Looking After the Valve Tappets.

Engines which are provided with adjustable valve tappets have the advantage that the distribution of the gases in the cylinders may be regulated to absolute synchronism. There is this disadvantage to the arrangement, however, that the adjustments may work loose if not properly secured in the beginning. On this account it is well to make sure that the check nuts holding the tappet adjustments are kept tight at all times, and that any apparent irregularity in the output of the different cylinders be made cause for going over the timing gear.

Peculiar Construction in Non-Skid Tire.

Because of the vigor with which it is being introduced in England, Cryder & Co., of New York, are importing from Great Britain the Kempshall all-rubber, non-skid tire, the unusual tread construction of which is claimed to possess peculiar merits in preventing side slip or loss of traction. As shown in the accompanying illustration, the tire has a series of circular depressions in the tread, while in the middle of each of the shallow pits so formed is a turret-like



KEMPSHALL NON-SKID TIRE

rubber stud of generous proportions. The circular resisting edges and the central turrets are credited with great effectiveness in checking slipping or sliding on the greasiest road surfaces. The further quality of cooling the tread in high speed running is also ascribed to this construction since it presents a great area of radiating surface. In the building of the tire certain special features are claimed, including the use of alternate layers of rubber and canvas so disposed as to give maximum strength.

Trouble from Valve Stem Expansion.

That puzzling engine difficulty which is manifest by a loss of compression when the cylinders are hot, when they are known to have been tight when cold, is readily explained by the expansion of the valve stems during the warming process. Unless a proper amount of clearance is allowed between the ends of the stems and the tappets, this may be sufficient to prevent the valves from setting. This difficulty has befooled the wisest of drivers.

Many Makers Using Shock Absorbers.

Shock absorbers as part of the regular equipment for the 1909 cars of the George N. Pierce Co. are announced by the Hartford Suspension Co., of New York, whose Truffault-Hartford absorbers are to be used for the fifth consecutive year. In all, 20 concerns are using Truffault-Hartford shock absorbers as equipment.

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POSITION OF THE SPARK PLUG

Its Effect Upon Resulting Power Output as Shown by Experiments—Variations Caused by Engine Speed.

One of the most enlightening chapters of experiment ever presented to the automobile industry resulted from the investigations of a year and a half ago from which W. Watson, the English scientist arrived at the, then, startling conclusion that the "fatness" of the ignition spark had absolutely no effect on the power output of the motor. Supplementing these investigations, a second article later appeared in which the influence of the character of the spark on the power developed was further treated. A third instalment has now appeared from the same source, in which the effect of the position of the spark plug upon the resulting power output is considered.

In the former experiments a low compression engine was employed, and one which, furthermore, was not available for speeds over 900 revolutions per minute. In the engine upon which the latest trials were made, a compression pressure of 87 pounds was maintained, while the machine was capable of being run satisfactorily at speeds up to 1,600 revolutions per minute. In reference to the apparatus and method of test, Mr. Watson says:

"The engine used is a four-cylinder one, the bore being 85 mm. and the stroke 120 mm. The ignition is by means of either a high tension magneto (Lacoste 1906 type) or a single coil and high tension distributor. The indicator diagrams . . . . were all obtained, except when otherwise noted, from one cylinder (No. 2) by means of the optical indicator used in the previous series of experiments.

"The previous experiments having indicated that the position of the sparking plug had an important bearing on the power developed, two spark plugs were fitted, one over the inlet valve (the usual position) and the other over the exhaust valve, the valves in separate pockets on opposite sides of the combustion space. These spark plugs could be used in series, so that sparks occurred simultaneously in the two pockets or either could be used alone, the change being made by means of a switch." . . . .

In the first test under discussion, with the motor running at 640 revolutions per minute, it was observed that only slight differences in power were obtained. With the spark over the inlet valve the indicated horsepower per cylinder was 2.8, the corresponding value of the mean effective pressure being 83.9 pounds per square inch. With the spark over the exhaust valve the indicated horsepower was 3.0 and the mean effective pressure 90.0 pounds per square inch. Finally, with both sparks occurring simultaneously, the indicated horsepower was 2.9 and the mean effective pressure was 86.7 pounds per square inch.

When the speed of the engine is increased to 1,100 revolutions per minute a marked difference is obtained with the different sparks. In the first place, when the charge is fired at the two points the work obtained is very considerably greater than is the case when only one spark is used. Thus:

	I.H.P.	M.E.P. lbs. sq. in.
Spark over inlet valve.....	4.6	79.4
Spark over exhaust valve ..	4.6	79.1
Both sparks	5.2	90.5

Further, a curious difference in the conditions of the gases in the cylinder during the working stroke will be seen. Thus the expansion stroke shows that well marked pressure waves existed in the cylinder during nearly the whole of the stroke. In the case of the spark over the exhaust valve, these waves are even more well marked. When, however, the two sparks occur simultaneously, practically all signs of waves in the cylinder disappear. It would thus appear that when the combustion of the charge is started in one of the pockets only, waves are set up which pass backward and forward across the cylinder. When the charge is fired in both pockets, then the waves would appear to interfere with one another.

When the speed is further increased to 1,620 revolutions per minute, the differences are even more marked, as is shown in the following table:

	I.H.P.	M.E.P. lbs. sq. in.
Spark over inlet valve	6.5	76.3
Spark over exhaust valve ...	6.4	75.1
Both sparks	7.3	85.7

At a speed of 1,100 revolutions per minute, the magnitude of the difference obtained with the sparks depends to a certain extent on the strength of the mixture. When the carburetter is adjusted so as to give the best mixture at this speed, the improvement obtained by using the two sparks is not quite so great. At higher speeds, such as 1,600 revolutions per minute, however, the improvement obtained with the two sparks was most marked with all strengths of mixture.

The improvement obtained when using both sparks at the higher speeds is due to the more rapid ignition of the charge. The fact that the advantage of igniting the charge in both pockets is greater the greater the speed is best illustrated by the indicator card from which it is readily apparent that at high speeds the more rapid rate of inflammation of the charge results in a higher pressure. For it is only at high speeds that this rapidity of burning of the charge is of such vital importance. With slow speeds it is quite possible that the more rapid burning obtained with the two sparks may be a disadvantage, for in practice the spark is often too far advanced at slow engine speeds, and hence the comparatively slow burning obtained when only one spark is used partly compensates for the too great spark advance. Such a case will occur if, as is sometimes done, the timing of the magneto is fixed. Some makers adopt this arrangement, the argument being that the spark occurs earlier and is much "fatter" when the armature is rotating rapidly, and hence that an automatic adjustment takes place.

Two tests, A and B, were made at 640 revolutions per minute with magneto ignition. In the first case the diagram was obtained using at this speed the spark adjustment which gave the best result at 1,600 revolutions, while diagram B was obtained by retarding the spark. It will be at once observed that if the magneto is adjusted to give the maximum power when the engine is running fast, then when the engine is running slow the power will fall off considerably, and there will be a tendency to knock. The difference in power is considerable, being nearly 14 per cent:

	M.E.P.	I.H.P.
In A	86.0 lbs. sq. in.	2.9
In B	97.4 lbs. sq. in.	3.3

In this connection the opportunity was also taken to make some further comparisons between the effects obtained with a coil and with a magneto, and it was found that with weak mixtures there was a decided improvement obtained by using the intense spark given by the magneto.

"Some insight into the reason why some engines are found to give so much more power with the magneto ignition was, however, given by the present engine," says the author. "The magneto has a wipe contact maker which is used with a single coil, the same high-tension distributor being employed as is used with the magneto. When this contact maker is used the diagrams obtained at a speed of 640 revolutions per minute from each of the four cylinders . . . . showed that the timing is hopelessly wrong, for while in cylinder 2 the spark advance is about right, in the other three cylinders the spark occurs much too late, and the diagrams illustrate the corresponding loss of power. At higher speeds the effects of the error in timing are very much more marked. Instead of attempting to readjust the wipe contact maker, a single make and break was fitted up on a counter shaft, and this shaft was driven at twice the engine speed. In this case the same make in the primary circuit of the coil is used for all four cylinders, and the only variation which affects the timing of the sparks in the different cylinders is the lag of the trembler blade, which may vary slightly from instant to instant, for, although the same trembler is used for all the cylinders, yet since the vibrations set up in the trembler during one 'make' will not in general have entirely died out when the next 'make' occurs, the rapidity with which the first trembler 'break', i. e., the first spark at the plug, occurs, will in a measure depend on the phase of the vibration of the trembler existing when the second 'make' occurs."

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BIG MASSACHUSETTS REGISTRATION

State Income from Motor Vehicles More Than $100,000 for First Half of Year—Many Non-Residents Registered.

Massachusetts is deriving from the registration of motor vehicles a bigger income than ever has been yielded from that source. Cars have been registered recently at the rate of about 50 each day, and the total number so far since January 1 has been 15,767. Returns for the first half year, which have reached the state treasurer, show that the fees collected in connection with the automobile activities by the Massachusetts highway commission since December 1 last, amounted to $100,782. This is more money than the automobile registration business has ever before brought in within such a short period. About 10 per cent. of the cars registered recently have been those of owners having residence in other States, but who have been coming into Massachusetts with their cars for tours or for a stay on a summer outing. About 300 registrations were reissues.

Since January 1, 366 dealers' licenses have been issued; 1,630 motorcycles registered; whereas for the corresponding part of the year 1907 the number of automobiles registered was only 4,953; of motorcycles, 535; and dealers' licenses, 58. The change in the law has had a good deal to do with the increase in the figures; still there has been without question a substantial gain in the number of cars used and operated in the State. A large gain is also recorded in the number of operating licenses issued. Up to the end of July of last year, 3,293 private operators and 3,977 professional chauffeurs had been licensed. This year, since December 1 last, the time of opening the official year's record, the total of private operators has reached 4,057 and of professional chauffeurs 4,480. It is worth noting that out of slightly under 2,000 new applicants for examination for professional chauffeurs' licenses the commission's examiners rejected about 30 per cent.

A new fee introduced this year is the 50-cent charge for duplicate sets of certificates for either cars or operators. This was authorized by the new law as a means of heading off what had grown to be a positive abuse. Operators and owners, losing their papers through mere carelessness, would run to the highway commission's offices for duplicate sets. So many of these requests came in that often the time required for getting out the duplicate was equivalent to the services of one clerk for hours on a stretch. The issue of hundreds of duplicates in this way made an appreciable increase in the office expense, and it was felt that a tax on the carelessness that made it necessary would be only fair. The only exemption from the fee is for police and court officers who need duplicate sets of certificates for handling cases in court.

New York's Automobile Revenue Shrinks

Figures given out by the Secretary of State of New York show a falling off in receipts from automobile certificates. For the first six months of 1908 the receipts of the office are $900 less than the receipts of the first six months last year. Up to date the automobile department registered 8,245 automobile owners, as against 8,519 for the first six months of 1907. There is an increase noted in the number of chauffeur licenses issued, the number being 5,247 as against 5,191 for the first six months of last year.

There is also a decrease of 156 in the number of new companies organized in the State from January to July. The fees are heavy, however, and foot up more than $60,000 for six months. The fees in the motor vehicle department are also quite satisfactory, amounting to more than $27,000. For the period covered by the report the number of new corporations formed in the State is 6,634, the most of them being from New York and Brooklyn, with Buffalo, Rochester, Syracuse, Utica, Troy and Albany ranking in order named. The majority of automobile owners registered from Greater New York, with Buffalo and Syracuse and Rochester a close second, Utica and Albany following.

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GLENCOE IN MOTORPHOBIC FRENZY

Chicago Suburb Engaged in Bitter War for Continuance of "Traps"—Automobilists Fighting for Fair Play.

Out Chicago way "there's blood on the face of the moon." Bitter war is raging with the village of Glencoe on one side and the Chicago Automobile Club on the other. Legal machinery is in active operation and victims from each side are tangled up in the gearing. The automobilists are threatened with a variety of things, the village constables are threatened with doses of cold lead, and the village itself is threatened with bankruptcy. The hostilities began several weeks ago, as reported in the Motor World at the time, when Special Policeman Frank H. Moor, failing to halt an automobile driven by Thomas P. Henderson, fired several shots from his revolver, one of which struck Miss Buena Stribling, who was one of the passengers in the car, and who fortunately was not injured, the bullet glancing from a button on her dress waist.

Moor has been indicted by the grand jury on a charge of assault with a dangerous weapon; Henderson has been fined by Magistrate M. T. Lane, of Glencoe, for overspeeding, and is under a charge of "assault with intent to commit murder," in that he attempted, as alleged, to run over Moor with his automobile; the automobilists are after Lane's magisterial scalp, and one of them has anonymously notified Lane that if the village cops do any more shooting there will be rifle shots in return; the automobile club of Kenilworth has joined forces with the Chicago club to make war on "speed traps"; the Kenilworth authorities are in sympathy with this movement; the Glencoe authorities are drumming up pugilists in Chicago to knock the blocks off the pickets placed by the automobilists to give warning of the "traps"; water wagons and other obstructions are to be wheeled into the path of refractory scorchers; a gold medal for "heroism" is to be conferred on Special Policeman Moor; this and a lot of other things; and the conservative people of Glencoe are wondering who is to pay for Glencoe's share of the hullaballoo.

The legal amenities in the matter, largely tinctured with acerbity, are under the direction of Village Prosecutor Morton Culver on one hand, and Sidney Gorham, secretary of the Chicago Automobile Club, on the other. The two lawyers have had some snappy colloquies at several of the various hearings that have been made necessary by the cross fire of legal proceedings and both are in for a fight to the finish. Personally, however, the two are slinging their wordy arrows at each other without any personal venom on the tips. It may be that out of the chaotic conditions there will come a "modus vivendi" to be maintained by an observance of the speed laws on the part of motorists, and by a sensible and reasonably tolerant executive of the law by the village authorities. Meanwhile the controversy is furnishing column stories for the Chicago papers.

Applying Speed Limit to Street Cars.

That speed limitation is not intended to apply only to automobiles and motorcycles, at least in New York City, was evidenced on Sunday night, 2d inst., in the arrest of Martin Davy, a motorman on the Columbus avenue and Broadway line of street cars. Davy was made a prisoner during the night by Detectives Lehane and Coleman, of the West Sixty-eighth street police station. In the night court they told Magistrate Harris that they timed the car from Seventy-seventh street to Seventy-ninth street on Columbus avenue, and it went at the rate of 18 miles an hour. From Seventy-ninth street to Eighty-first street the car covered the distance at a speed of 21 miles an hour. Magistrate Harris paroled Davy for examination in the West Side Court. Many complaints have been received by the police of the high rate of speed maintained by the cars in the upper section of the city.

Captures Jury by Clever Defense.

By a defense that certainly is entitled to be considered clever, David Pryor avoided conviction on a charge of overspeeding within the corporate limits of Uvalde, Tex., the other day. His trial occupied two days and the case was decided by a jury which was convinced by the double contention that the prosecution could not prove that Pryor was driving the car because he was going so fast that no person could identify him; and that if really the car in question was his car it was being used without his knowledge or consent. Ten of the twelve "good men and true" in the jury box acquitted him by a majority verdict.

Automobiles Connect Texas Towns.

On Monday, the 27th ult., a new automobile service between Temple and Marlin, Texas, was inaugurated. The route will be through the towns of Oenaville, Blevins, Bellfalls, Chilton, Mooreville, and several very small places, a total distance of 35 miles. The enterprise is backed by J. F. Robinson, of San Angelo, who for some time has been operating a similar service between San Angelo and Big Springs. The new line will permit a saving of a full day's time between the terminal points.

Abington Gets Easy Money.

Local activity in the suppression of automobile speeding has been the cause of bringing into the little township of Abington, Pa., the tidy sum of $800 since the first of May. During that time, no less than 60 fines have been administered, ranging from $10 to $55, 57 cases have been dismissed, fines suspended in 20 cases, and warnings given in no less than 162 other instances.

FREEING PARKS FROM OILY ODORS

Enforcement of Anti-Smoke Rule Begun with Vigor—Automobiles with Trails of Smell Kept Out.

Enforcement of the new anti-smoke regulation of the New York department of parks was begun on Saturday, 1st inst., and 17 arrests were made in Central Park. Three of the victims were operators of sight-seeing cars. Of the entire number, 11 were discharged with a reprimand by Magistrate Moss in the Yorkville court. Six who were arrested after the Magistrate had adjourned court for the day, were in Yorkville Court on Monday and had their cases adjourned. Magistrate Moss announced that if the Park Department could not furnish more evidence than had been produced in the cases of the men who had been discharged, he would dismiss all the cases that are brought before him.

Only three arrests were made in Central Park on Sunday and the victims were drivers of motor cabs, two of whom pleaded ignorance of the new rule. Hundreds of gasolene vehicles were "shooed" away by the police at the park entrance. Lieut. Hefferon and 30 mounted policemen were on hand from early morning until midnight, and they did their best to keep chauffeurs from violating the new rule. Hundreds of machines, some public, some private, would have entered had it not been for the warnings of the mounted men. All who were stopped told the policemen that they had not heard of the new rule.

Some of those who were halted at the entrances and turned back were inclined to take offense at the insinuation that their automobiles were ill-smelling affairs. There were some heated arguments between such owners and the policemen, and several times Lieut. Hefferon was called on to pass upon the machines in question. In a few instances the machine under discussion was allowed to enter the park. But in most instances the decision of the policeman who had halted the machine was upheld by the Lieutenant.

But, in spite of the large number of automobiles which were turned back from the park, there were large numbers of motor cars to be seen on the park drives all day Sunday. They did not leave an odor of gasolene, however, and consequently escaped being included in the class regarded as a nuisance.

The park authorities say that the smell which many of the automobiles emit is entirely a needless nuisance, and that it usually arises from the fact that the mechanicians allow the lubricating oil to leak. This can be easily prevented. The leaking oil, coming into contact with the heated parts of the machine, sends out an odor which is far from pleasant.

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The Brush Runabout EFFICIENCY RUN

Started Last Saturday

INTRODUCING THE

MODEL B BRUSH RUNABOUT

FOUR runabouts and one delivery car started from Detroit Saturday afternoon, as follows: No. 1 for Boston, No. 2 for Washington, No. 3 for Kansas City, No. 4 for Minneapolis, No. 5, delivery car, for Milwaukee and return. Each car takes a roundabout route in order to take in a large number of good towns and demonstrate and exhibit the car in each one. With time taken out for demonstrating, it is expected that only about 90 to 100 miles a day will be covered, the total distance for each car being about 1,500 miles.

Car No. 3 will continue from Kansas City to Denver, and will then attempt the climb to the top of Pike's Peak, a feat which, we understand, no automobile has yet accomplished under its own power.

At present writing (Tuesday) all cars are running ahead of schedule, with no trouble reported.

A booklet will be issued at the close of the run giving gasolene and oil consumption, repairs, adjustments, mileage and other data. Send your name and address for it.

This run is intended to help our present agencies, interest new ones, and in general prove beyond a doubt that the Brush Runabout is what we claim for it—a car for work, not worry—a patient, ever-ready, never-tiring servant, quick, lively, easy to start, absurdly economical to run, requiring the minimum attention and giving the minimum trouble.

The Model B has much more graceful and in-style lines than the old model—divided seat, running board and winged fenders. WATCH IT!

BRUSH RUNABOUT CO., DETROIT MICHIGAN

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The Week's Patents.

887,067. Engine Starter. Clyde J. Coleman, Rockaway, N. J., assignor to Conrad Hubert, New York, N. Y. Filed Aug. 19, 1905. Serial No. 274,819.

1. An engine starter comprising a power storing device, a ratchet member connected thereto, and a rotary pawl carrier connected with the engine, the ratchet member having two oppositely facing ratchet teeth and the pawl carrier having a centrifugal starting pawl co-operative with one ratchet tooth and movable by centrifugal force out of engagement therewith and a centrifugal power storing pawl co-operative with the oppositely facing ratchet tooth and movable by centrifugal force into engagement therewith.

887,093. Transmission Gearing for Automobiles. Ernst G. Hoffman, New Rochelle, N. Y. Filed Dec. 9, 1907. Serial No. 405,686.

1. In a motor vehicle, the combination of a spring supported body, an axle, a road wheel journaled upon the axle, driving mechanism supported by the body and comprising a driving wheel mounted upon a substantially longitudinal axis and a driven wheel mounted upon a transverse axis with freedom for oscillation about said longitudinal axis, and operating connections between said driven wheel and the corresponding road wheel.

887,094. Motor Vehicle. Russell Huff, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Aug. 21, 1907. Serial No. 389,561.

1. The combination with a motor vehicle frame, of a fuel tank arranged transversely on the rear end portion thereof, and one or more metal straps for securing said tank, each strap comprising two parts, hinged together, one of said parts extending over the tank and downwardly on one side thereof, and the other part extending downwardly on the opposite side of the tank, the ends of the strap being suitably connected to the frame.

887,159. Process of Making Flexible Wire Shafts, Hartwell W. Webb., Newark, N. J., assignor to Webb Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed March 26, 1907. Serial No. 364,735.

1. The process of making a flexible shaft out of one or more strands of wire, which comprises the following steps: first, winding one or more strands of wire upon a mandrel; second, removing the mandrel; third, winding one or more strands of wire upon the first helix as a mandrel in a direction opposite to that in which the wire forming said first helix was wound; fourth, stretching the shaft so formed lengthwise to an extent slightly beyond the elastic limit of the structure as a whole.

887,160. Flexible Wire Shaft. Hartwell W. Webb., Newark, N. J., assignor to Webb Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 8, 1907. Serial No. 356,449.

1. A flexible shaft comprising in combination two helical coils of wire wound one upon the other, each coil of each helix being separated by a slight distance from the adjacent coils of the same diameter and from the adjacent coils of the next inner or outer helix.

887,165. Spring Suspension. James C. Whittle, Flint, Mich. Filed Feb. 25, 1907. Serial No. 359,239.

1. The combination with an elliptical spring, of toggle levers connecting the members of said spring, and means for attaching the connected ends of the said levers to a sill movable longitudinally of the sill adapted to transmit lateral movements of the sill in either direction parallel to the plane of the spring to the said lever ends.

887,184. Universal Joint. Charles A. Brewer, Noroton Heights, Conn. Filed Aug. 23, 1907. Serial No. 389,811.

1. A device of the character described, comprising two trunnioned heads, and a coupling therefor consisting of inner and outer members having an annular lubricant chamber between them, the inner member comprising two halves with tongue and groove meeting faces and having trunnion bearings which cammunicate with the lubricant chamber, the outer member inclosing the two halves of the inner member and holding them assembled, annular receptacles to catch or detain escaping oil being formed each side of the lubricant chamber.

887,227. Dust Removing and Exhaust Device for Automobiles. Peter N. Ramsey, New York, N. Y. Filed March 14, 1902. Serial No. 98,145.

1. A motor vehicle having a tube extending longitudinally of and below the vehicle body and open at its front and rear ends and having its discharge of substantially the width of the vehicle body and positioned to blow away the dust and dirt rising behind the vehicle.

887,237. Gas Engine. Harris T. Dunbar, Buffalo, N. Y. Filed March 26, 1907. Serial No. 354,622.

1. A gas engine comprising a cylinder having a fuel port and an exhaust port, and a piston arranged in the cylinder and having a spiral guide way whereby the fuel is caused to whirl in said cylinder, substantially as set forth.

888,374. Explosive Engine. Henry O. Westendarp, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed April 14, 1905. Serial No. 255,510.

1. In an explosion engine, the combination of a cylinder having exhaust ports and separate fuel and air admission ports at its forward end, a piston in the cylinder which moves over said ports to open and close them, a carburetter connected with the fuel admission ports, means for supplying compressed air through the air ports while the exhaust ports are open and also for supplying it to the carburetter to produce a fuel charge therein under pressure, and means which permits the fuel charge to pass from the carburetter to the cylinder after the exhaust ports are closed.

888,405. Motor Vehicle Driving Mechanism. Joseph P. Lavigne, Detroit, Mich., assignor to The Blomstrom Manufacturing Co., Detroit, Mich., a Corporation of Michigan. Filed June 12, 1907. Serial No. 378,674.

1. In a motor vehicle driving mechanism, the combination of a drive shaft actuated by the motor and supported in vertical bearings, a friction disc at the lower end of said shaft, a longitudinally disposed driven shaft below the drive shaft, positive drive connection between the rear end of said shaft and the rear axle, a frame in which a portion of said shaft below the friction disc is journaled, a friction pulley shiftable upon said portion of the shaft and adapted to rotate the same and means for raising and lowering the frame.

888,487. Carburetter. Charles R. Greuter, Wilkes-Barre, Pa. Filed June 5, 1906. Serial No. 320,322.

1. A carburetter comprising a mixer casing having an air chamber and a mixing chamber, a mixing tube extending through the air chamber into the mixing chamber and provided with an air port opening into the former, fuel feeding means discharging into the mixing tube, an air valve arranged to constitute a diaphragm between the two chambers and provided with a sleeve member slidably mounted on the mixing tube, a spring held lever engaging the air valve and normally holding the same closed, and an adjustable regulator for said lever.

888,504. Wheel. Arthur L. Jimenez, New York, N. Y., assignor of 45-100 to William Freeman and 5-100 to Joseph Lopez Jimenez, New York, N. Y. Filed April 6, 1907. Serial No. 366,811.

1. The combination with spokes each having an annular shoulder between its ends and a rigid felly secured to the outer ends of said spokes, of a casing embracing the felly and the outer ends of the spokes, a tire carried by said casing and a cushion within the casing between the felly and tire.

888,523. Friction Clutch. Swinfen Bramley-Moore, London, Eigland. Filed Feb. 23, 1907. Serial No. 358,900.

1. The combination in a friction clutch of the single cone type, of a part fixed to the driving shaft, a movable part carried by a sleeve mounted to slide on the driven shaft, an intermediate piece located between the two parts of the clutch, a spring operating between the said intermediate piece and the movable part of the clutch, a second spring operating between the said intermediate piece and the part of the clutch carried by the driving axle, a stop carried by the movable part of the clutch, a sleeve carrying the intermediate piece, and a grooved collar carried by the said sliding sleeve, as set forth.

888,535. Motor Road Vehicle. Frederick H. Royce, Manchester, England. Filed Aug. 12, 1907. Serial No. 388,159.

1. Means for suspending the motor and gear box in the frame of a motor road vehicle comprising four arms projecting from each part the rear two of which are rigidly fixed to the frame, bell crank levers pivoted to the other two arms, the one end of each bell crank lever being connected to the frame, and a coupling rod connecting the other ends of said bell crank levers, as set forth.

888,589. Drive and Steering Gear for Automobile Vehicles. Edward P. Cooper, Paw Paw, Mich., assignor of one-half to Olin James Cooper, Hillsdale, Mich. Filed Feb. 25, 1907. Serial No. 359,083.

1. The combination of the front and rear frames; a swivel connection for said frames; hollow axles; hollow spindles for said axles; vertically arranged pivots for the connecting said spindles to said axles; tubular axle shafts arranged in said axles; spindle shafts arranged in said spindles; gears on said axles and spindle shafts; connecting gears for said axle and spindle shaft gears mounted on said spindle pivots; wheels mounted on said axle spindles and connected to said spindle shafts; steering shafts arranged in said axle shafts; gears on the outer ends of said steering shafts; gears secured to said spindle pivots and arranged to mesh with said gears on said steering

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shafts; a pair of adjustably mounted plates curved in cross section having a pair of diagonally arranged grooves in their inner faces, said grooves diverging in each direction from a central point, each groove being substantially straight on one side of its central point and curved on the other; pins carried by said steering shafts arranged to engage the grooves in said plates; a steering rod; connecting cables for said steering rod to said plates whereby they are adjusted; guide pulleys for said cables, the guide pulleys for the front plate being arranged on the said front frame and those for the rear plate being arranged on the said rear frame; a driving shaft; gear connections therefor to a pair of the said axle shafts; transmission shafts arranged in pairs; gear connections for one of each pair or said transmission shafts to said driving shaft and for the other pair of said transmission shafts to the other pair of axle shafts; driving connections for said pairs of transmission shafts, consisting of wheels having rod-like spokes to said shafts, rim blocks slidably mounted on said spokes, discs having tangentially arranged grooves in their inner faces adapted to engage said blocks whereby, when said discs are adjusted, said blocks are shifted on said spokes, adjusting rods for said discs having spirally arranged grooves therein, and pins on said discs arranged to engage said grooves whereby, when said rods are shifted longitudinally, said discs are adjusted; connecting belts for said transmission wheels; connecting bars for said adjusting rods; and a connecting rod for said bars connected to said steering rod, all coacting for the purpose specified.

888,594. Transmission Mechanism. Orson W. Davis, Rochester, N. Y., assignor to Gearless Transmission Co., Rochester, N. Y., a Corporation of New York. Filed Aug. 10, 1907. Serial No. 387,974.

1. In a transmission mechanism, the combination of the motor and driven shafts journaled to rotate independently, a main driving gear fixed to the end of the motor shaft having a hub with extended ends, a pinion carrying frame spanning the ends of said shafts and having its ends loosely journaled in said frame and meshing with the teeth of said driving gear, means for transmitting motion from said pinions to the driven shaft to reverse the motion thereof, means for locking one end of said pinion frame to the driven shaft, and means for locking the other end of said frame to the motor shaft.

888,597. Sparking Circuit Controller for Explosion Engines. Willard E. Dow, Braintree, Mass. Filed Feb. 8, 1904. Serial No. 192,481.

1. A rotary interrupter, comprising a rotary device provided with a tripping projection, and a series of straight, leaf contact springs extending tangentially of the path of said tripping projection, an adjustable contact for each spring extending toward the middle of said spring on the side thereof opposite said rotary device, each spring being held rigidly at its outer end in free suspension in the plane of said tangency and being thin, light, non-weighted and uniform in thickness from its support to its extreme free end, the latter terminating substantially at said point of tangency with the path of said tripping projection, and being engaged at its free tip end by the tripping projection as the latter is revolved by said tripping device.

888,628. Tire Tightening Apparatus. George R. Macomber, Chicago, Ill. Filed Feb. 8, 1908. Serial No. 414,963.

A device for expanding fellies comprising a hollow shell which is angular in cross section and provided with longitudinal, angular flanges, the ends of which are inwardly turned forming guideways, the outer faces of said inwardly turned portions of the flanges having ratchet teeth, the inner edges of which are flush with the inner end of said flanges, a hollow standard angular in cross section and telescoping within the guideways of said shell, a shaft journaled upon said standard, pins mounted eccentrically thereon, dogs pivoted to said pins and adapted to engage said ratchet teeth, as set forth.

888,705. Speed Indicator. Edwin T. Greenfield, Kiamesha, N. Y. Filed June 22, 1907. Serial No. 380,210.

The combination of a controlling device comprising a two-part casing having bearings formed therein, a shaft journaled in said bearings, a gear on said shaft outside the casing for driving the same, a body pivotally mounted on said shaft, a collar loose on the shaft, a spring for positioning the collar, a link connecting the collar and body, and a lever pivoted on said casing and engaging the collar, said body, collar, spring, link and lever being within the casing, an indicating instrument having an index movable relatively to a scale, a flexible tubing having one end communicating with an opening in said casing and the other end connected to said indicating instrunment, and two wires extending through said tubing and connected at one end to said lever and at the other to said index, said wires

Matheson

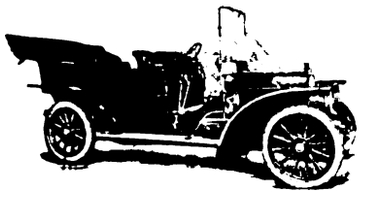
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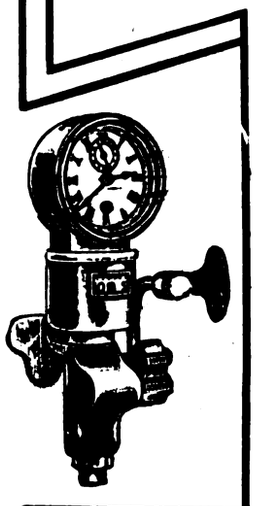
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being arranged to turn said index in opposite directions, substantially as set forth.

888,750. Speed Changing and Reversing Gearing. William A. Salter, Cedar Point, Kan. Filed Feb. 12, 1907. Serial No. 356,983.

1. In a change speed transmission mechanism, the combination of a driving shaft, a tubular driven shaft sleeved thereon, a small pinion mounted on and rotating with the driving shaft, a larger gear connected with the driven shaft, a stepped gear connecting said pinion on the driving shaft and gear on the driven shaft and mounted to rotate about the axis of the driving shaft and also about an independent axis, a casing rotatable about the axes of the shafts and provided with an internal gear meshing with larger of the pinions of the stepped gear, means for preventing said casing from rotating, other means for preventing said stepped gear from rotating about the axis of the driving shaft, and means mounted upon and rotating with the driving shaft and adapted to engage with the casing in order to lock the same to said shaft.

888,782. Spark Plug. Eligha Bruden, San Francisco, Cal. Filed Feb. 10, 1908. Serial No. 415,018.

1. A spark plug having a wire holder of non-conducting material and having a rear shoulder, two wires there-through, having exposed points adjacent to each other, between which the spark can pass, one of said wires extending to the outer end of the holder, and the other wire extending to said shoulder and being there exposed, and a metallic sleeve for the holder in contact with said exposed end and provided with means for securing it in the wall of an explosion chamber.

888,711. Sparking Plug. Louis Kantroditz, New York, N. Y. Filed March 6, 1907. Serial No. 360,931.

1. In a sparking plug, the combination of an electrode, and insulation around the same having a fixed portion and a vibrating portion.

888,876. Variable Transmission Mechanism. Orson W. Davis, Rochester, N. Y., assignor to Gearless Transmission Co., Rochester, N. Y., a Corporation of New York. Filed July 22, 1907. Serial No. 385,014.

1. In a frictional transmission mechanism, the combination of the motor shaft, a friction wheel movable axially thereon and rotatable therewith, a driven shaft in alignment with the motor shaft, a friction disc movable thereon and rotatable therewith, opposed friction wheels having plane faces adapted to engage the periphery of the friction disc on the driven shaft, means for moving the friction wheel on the motor shaft into engagement with the peripheries of the opposed friction wheels, means for moving said opposed friction wheels into engagement with the periphery of the disc on the driven shaft, and means for sliding said disc across the faces of said opposed wheels.

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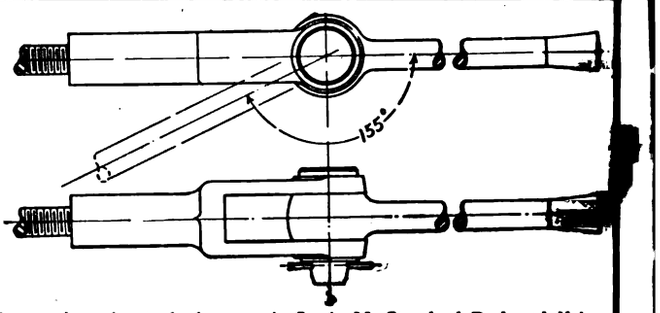
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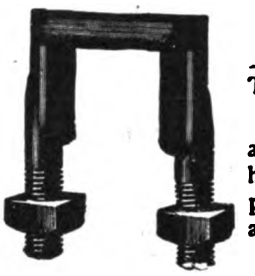
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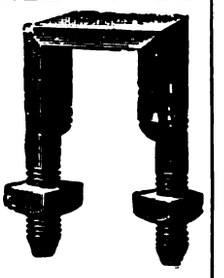
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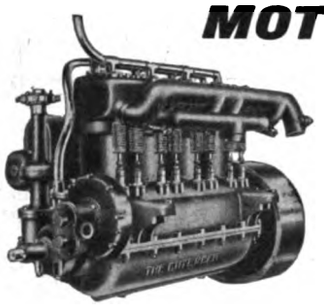
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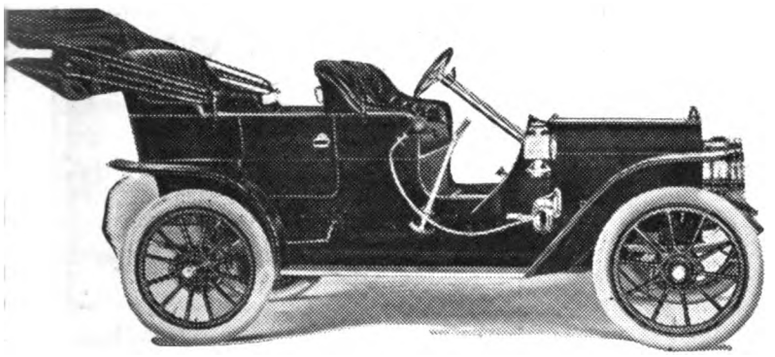
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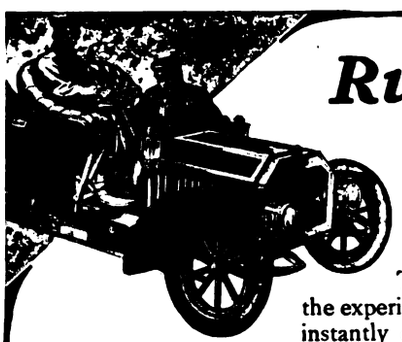
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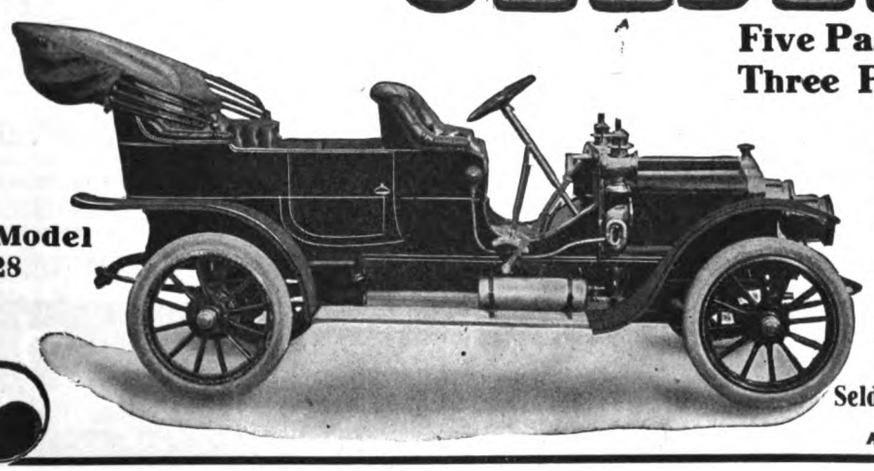
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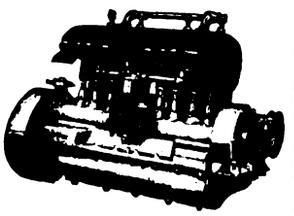
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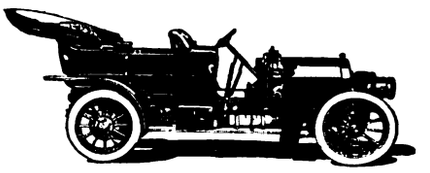
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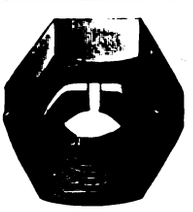
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SIDE-WIRE SOLID MOTOR TIRES
THE WORLD'S STANDARD
FIRESTONE TIRE & RUBBER CO., Akron, Ohio

MORGAN & WRIGHT TIRES
ARE GOOD TIRES

STEWART SPEEDOMETERS
OUTCLASS ALL OTHERS
Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model $40. American $25.
Guaranteed Absolutely for Five Years.
STEWART & CLARK MFG. CO.,
509 Diversey Boulevard, Chicago, U. S. A.

WE WILL NOT
accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.
THE HYDRAULIC PRESSED STEEL CO.,
Cleveland, Ohio.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find $2.00 for which enter my subscription to

The Motor World

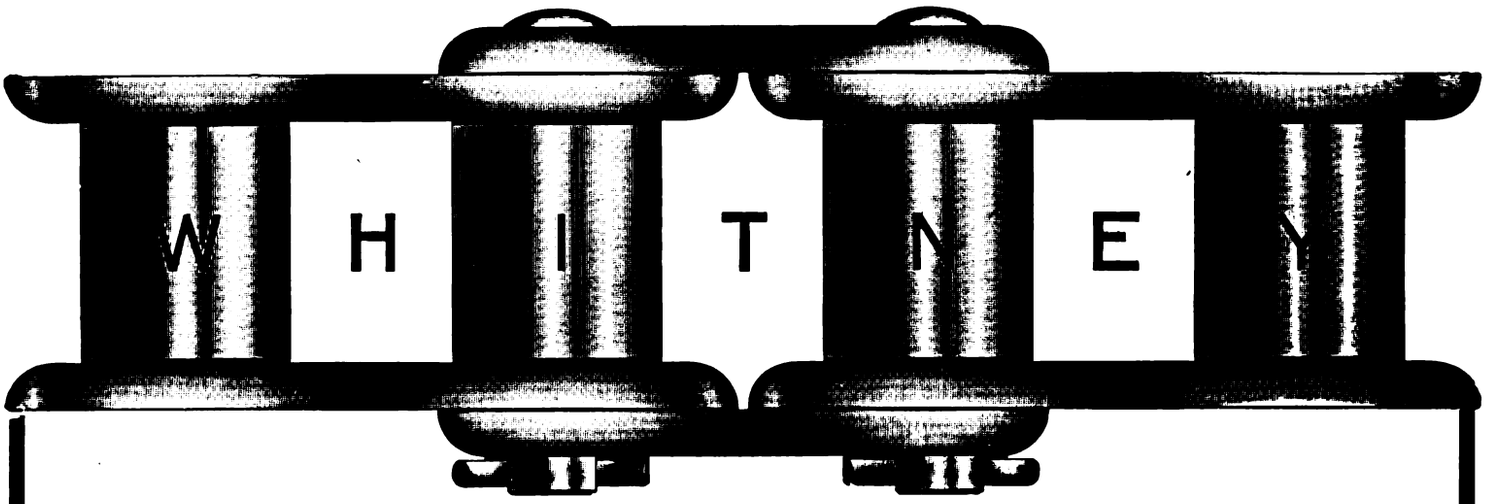
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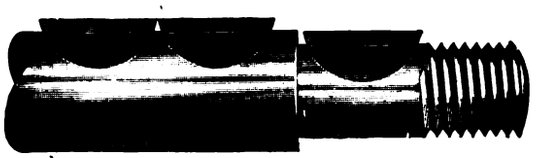
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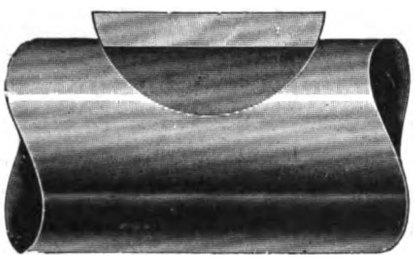


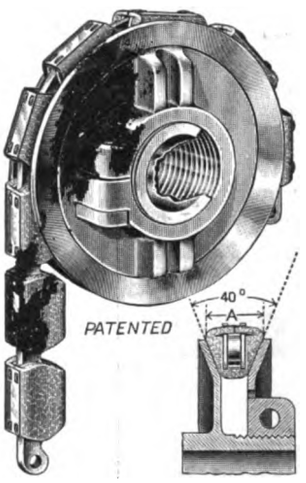
"Whitney" 1909 Model Chains and Prices

ARE NOW READY

All Motor Car Manufacturers should get full particulars before closing, as we have made great gains in strength and durability. With certain sizes of chain we have gained over 100% on earlier models.







New "Whitney" Chain Belt
FOR
Cooling Fans, Oiling Devices, Motorcycles, Etc.

If you are not taking advantage of the Woodruff Patent System of Keying it will pay you to investigate.

Better results and a great saving in cost.

We carry 95 regular sizes of Keys and Cutters in stock for immediate delivery.

THE WHITNEY MANUFACTURING COMPANY

Hartford, Connecticut

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lume XVIII New York, N. Y., U. S. A., August 13, 1908 Number 20

THE MOTOR WORLD

rade paper giving the
rld's Motor News

Ten cents a copy—
Two dollars a year



BOSCH

Bosch Magnetos Are Miles Ahead!

¶ Not only in marine and terrestrial travel, but also in aerial navigation.

¶ Zeppelin's great dirigible airship, without question the most advanced machine ever constructed for aerial navigation, used two Daimler Motor Engines equipped with BOSCH MAGNETOS.

¶ Dixey II (America), winner of the International Trophy and the greatest motor boat race in the world, was equipped with a BOSCH MAGNETO.

¶ The Grand Prix, the year's most important automobile event, was won by a Mercedes, which was equipped with a BOSCH MAGNETO.

¶ In the Prince Henry Contest (Germany), the first ten winning cars were equipped with BOSCH MAGNETOS.

¶ In the 1908 A. A. A. Touring Contest, the winning cars competing for the Glidden and Hower trophies were equipped with BOSCH MAGNETOS.

¶ In the New York to Paris Race, the Thomas Flyer, America's representative and winner, and the Protos (German) which finished second, were both equipped with BOSCH MAGNETOS.

¶ T. K. Hastings (America), driving an "Indian" Motocycle equipped with BOSCH MAGNETO, completed the six days reliability trials held under the Auto Cycle Union of England. Hastings received a gold medal.

Whatever you drive use the Bosch Magneto for Ignition.

BOSCH MAGNETO CO., 160 W. 56th St. NEW YORK

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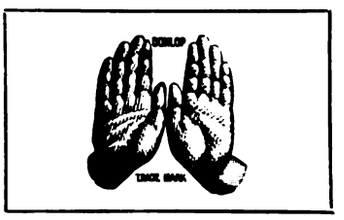
Tires Do Help to Sell the Car

¶A large manufacturer of automobiles remarked the other day: "We have found it economical in the long run and a selling point of great merit to equip our cars with tires the public know are 'standard'—tires with a time earned reputation for quality and satisfaction. That's why we equip all our cars with

HARTFORD TIRES



"The tire with the doubt and the risk left out"



Hartford Tires are so well and favorably known as the 'World's Best' that they are accepted by the purchaser of the car without quibble or question."

¶Certain it is we put into Hartford Tires and Hartford Tubes the best the world affords in material, workmanship and design.

THE HARTFORD RUBBER WORKS COMPANY

HARTFORD, CONNECTICUT

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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$2000

THE SELDEN CAR

Finished the Glidden Tour with a CLEAN SCORE and Was Deprived of a "Perfect Score" by a Technicality

We entered a stock car, which had already been run over 5,000 miles, without any shock absorbers, straps, bumpers or other safety appliances, complying strictly with the rules as to equipment. (All other cars were equipped with these devices.)

Our car was equipped with a speed indicator, the sprocket connection of which worked loose crossing the mountains in Western Pennsylvania and fouled our steering knuckle, making it impossible to avoid a large boulder in the middle of the road, and we broke a front spring in consequence.

The broken spring did not penalize us, nor the repairing of the spring, but because we used four machine-made nuts (instead of four hand-made nuts) we were disqualified from further contest for the Glidden Trophy.

Our car continued the tour as a non-contestant, checking in and out every day, observing all the rules and finished with a clean score.

It was in such good condition upon arriving at Saratoga that we made a non-stop run from Saratoga to Rochester, a distance of 272 miles on the following day without any adjustment whatever.

Our "extra parts" bag was not opened on the entire trip. No other car did any better.

COMPARE OUR CAR WITH OTHERS IN THE TOUR AND SEE WHAT WE HAVE ACCOMPLISHED

Demonstrating the highest quality of workmanship and material, durability, stability and the all-important fact that a strictly first-class gentlemen's car can be made and sold for $2000.

Why Pay Double the Price for a Name-Plate?

Duplicates of this car are now ready for delivery.

All our cars are sold with a guarantee and with all that we have out during the past season the cost of repairs amounts to little or nothing.

The "Silent Selden" (as the car has become known by its quiet running) is made on honor, a credit to the name of the man who invented gasolene automobiles, and every owner is proud of his purchase.

Superb riding, roomy tonneau, luxurious upholstery, smooth running, great hill climber, flexible and easily handled, economical in up-keep, stylish and attractive—the coming car of the multitude.

Now closing 1909 agencies—over half our output already spoken for. Good live agents wanted everywhere. Send for catalog and agency proposition.

SELDEN MOTOR VEHICLE COMPANY, Rochester, N. Y.

Members A. L. A. M.

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13,431 Miles of Triumph

ON

Diamond TIRES

Both Casings and Tubes

NEW YORK-PARIS RACE

¶From start to finish Diamond Quick Detachable Tires equipped the winning Thomas car. Without once failing to do their part, without once causing delay, Diamond tires performed their part with unparalleled excellence.

> It was a great victory. Diamond tires gave most excellent service and satisfaction.
> E. R. THOMAS MOTOR CO.

¶And note, also, that when Chicago was reached at the outset of the race, the tire equipment of the only other car to finish was voluntarily offered us, although on terms which we could not accept.

THE DIAMOND RUBBER COMPANY, Akron, Ohio

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THOMAS The World's Champion

The Thomas Flyer Wins the Race Around the World

The Thomas Flyer entered Paris Thursday, July 30th, winning the New York to Paris race, the greatest endurance contest in history, by TWENTY-SIX DAYS, and being the ONLY car of all those entered TO GO THE OFFICIAL ROUTE. The Thomas traveled 2385 miles on land under its own power MORE than its nearest competitor, and this over the worst, the most racking portions of the route, and under the worst conditions. In addition to this the Thomas traveled 3246 miles farther by water—a total of 5031 miles farther than its nearest competitor, which shipped by rail from Pocatello, Idaho, to Seattle, avoiding the most severe portion of the road across the American continent. That the Thomas should arrive in Paris only four days behind the German car, which traveled 5031 miles less, is sufficiently remarkable to cause world-wide comment. That the Thomas should perform this feat in spite of days lost by misdirection—in spite of days lost by the cornering of all the gasoline at Vladivostok by a foreign competitor—these facts and the fact that the Thomas which performed this feat is a regular stock car, are the reasons why all Europe is admitting today that America produces the best cars in the world, and that no car ever produced in any land can compare with the Thomas, or begin to duplicate its performance.

The Thomas Flyer which won the New York to Paris race was selected only six days before the race. It was already crated and tagged to be shipped to the Thomas agent in Boston. It was a stock model pure and simple and no change of any kind was made in any mechanical part, except the replacement of the drop front axle for one of the straight, such as are ordinarily used on Thomas cars shipped to Western districts. After traveling 13,431 miles over the worst roads ever attempted by any car, the Thomas is reported to be in excellent condition, and save for the physical exhaustion of its crew due to the terrific pace they made driving day and night through almost trackless wilderness COULD START FROM PARIS TODAY AND COME BACK OVER THE SAME ROUTE.

It is doubtful if American motorists will ever learn the whole of the frightful conditions the Thomas car met and successfully overcame. That of all the specially built foreign cars to start, one of them should actually finish directly contradicts the expressed opinions of many automobile experts, who frankly declared the route impassable to any self-propelled vehicle ever made. But that the Thomas, a simple stock car, should not only finish, but should be the only car to cover the official route, should win by TWENTY-SIX DAYS, defeating all these specially built foreign champions, proves that America is years ahead in the building of SERVICE cars, and that the Thomas leads the world in automobile construction by the same wide margin that the Thomas Flyer led all comers of all nations in the great race round the world.

The route of the racers led over the worst roads of the American continent at the worst time of year, through the heaviest snows of the winter, through the enormous snowdrifts, the heavy wind and deep ruts of Russia and Siberia in the rainy season, through almost impassable swamps, thousands of miles remote from civilization and repair shops, through unknown countries, over unknown and unbroken roads. A large proportion of this traveling was done at night, when road obstacles, avoidable in the day time, assumed the most dangerous proportions. Contrast this performance with the EASY DAYLIGHT TRAVEL OF A GLIDDEN TOUR ON WELL TRAVELED ROADS, ALWAYS AMIDST FRIENDS AND IN SIGHT OF VILLAGES OR FARMHOUSES, and the difference between the Thomas feat and the most trying public performances of other American cars will be readily apparent.

Every 1907-8 stock Thomas Flyer is a mechanical duplicate of this world's champion, and every 1908-9 Thomas Flyer is equal to this car in EVERY way, and superior to it in MANY ways, and ready at any moment for a trip 'round the world.

E. R. THOMAS MOTOR CO., BUFFALO, U. S. A.

WRITE FOR CATALOG

Full Information on Request
We Solicit Correspondence

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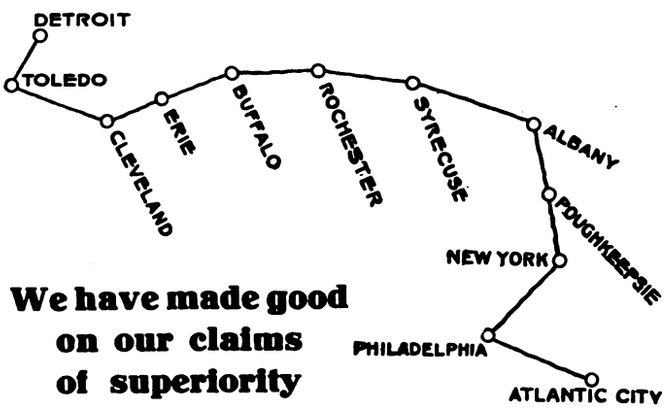
THE

"DETROIT ELECTRIC"

Runs from Detroit to Atlantic City

Total miles 1060, average per day 84, without a broken part, a change of batteries, or assistance of any nature.

NOTICE OUTLINE OF ROUTE



We have made good on our claims of superiority



MODEL "A"
The Car That Made the Wonderful Over-Land Trip

The successful accomplishment of this most remarkable run, puts the "DETROIT ELECTRICS" in a class of their own. Their high efficiency is demonstrated to both dealers and users.

"DETROIT ELECTRICS"
"The Best By Every Test"

Write for catalogue and agency proposition.

THE ANDERSON CARRIAGE CO.
DETROIT, MICH.

A handsome booklet with views and full details of the Detroit to Atlantic City trip will be mailed on application.

AGENTS WANTED EVERYWHERE.

AJAX
WRAPPED TREAD
TIRES

After all is said
and done,
no matter how
glowing
the promises of
tire makers,
the only thing you have
to tie to
is
the word
of the dealer who
sells you.

If the tire
goes bad
you have the privilege
of carrying on
one end
of a controversy
with the factory—
that's all.

The tire maker
makes good—or doesn't
as he sees fit.

There's one exception—
AJAX—

Every AJAX tire
is guaranteed
for 5000 miles.

Write for copy of Guarantee, stating what size tire you are using. Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.
BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodward Ave. — Los Angeles, 1040 S. Main St.
Agents in all large cities.

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Large Sales

make it possible for us to import **THE CELEBRATED BRAMPTON CHAINS** from **ENGLAND** (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped **"BRAMPTON."**

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

1 x ⅜ x 9-16—1 x ½ x ⅝—1 x ½ x 9-16 roller	$1.00 per foot.
1 x ⅝ x ⅝ roller	1.17 "
1¼ x ½ x ⅝—1¼ x ⅝ x ⅝—1¼ x ⅝ x ¾ roller	1.25 "

We also carry in stock the **BRAMPTON CHAINS** to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. **Catalog on request.**

We are Sole American Agents for **BRAMPTON CHAINS,** and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Antomobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, $3.50 each.



CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo. 202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

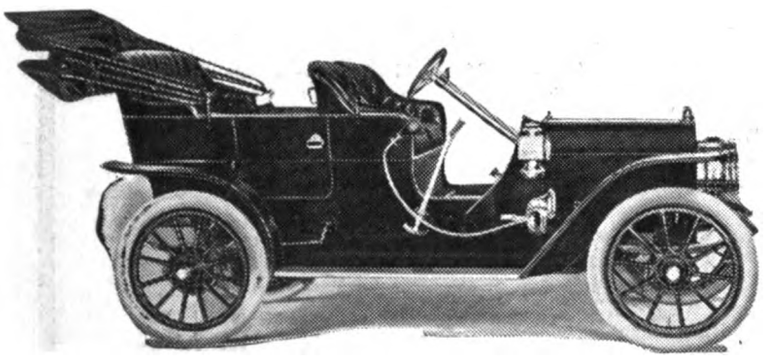
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MORGAN & WRIGHT, DETROIT

are making a 33 x 4 tire which can be applied on a 32 x 3½ rim, and a 31 x 4 tire for use on a 30 x 3½ rim.

GET PARTICULARS AND PRICES

OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

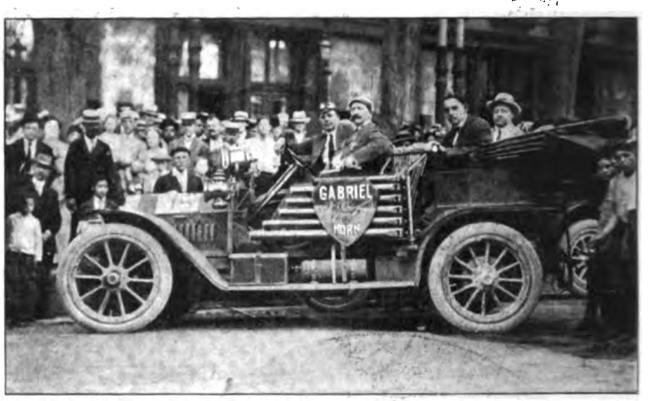
¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.



A Successful Test

The cut illustrates the Gabriel Horn car which accompanied the Glidden Tourists; a trip made to test the Gabriel Horn and Gabriel Shock Absorbers. Over all roads, rough and even, both gave extreme satisfaction and demonstrated that they are the best on the market to-day.

THE GABRIEL HORN can be attached to exhaust of any car, steam or gasoline.

THE GABRIEL SHOCK ABSORBERS for any car or any spring; make easy riding and protect both the springs and occupants of car.

THE GABRIEL CUT-OUT VALVE relieves back pressure of engine and assists in speeding, hill climbing and on heavy roads. Write for prices to-day.

GABRIEL HORN MFG. CO.

1417 E. 40th St., CLEVELAND, O.

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The Car You Can Afford to Buy and Keep

is the Mitchell.

—Because it is moderate in **price** ($1,000 to $2,800).

—Just as stylish, handsome and well finished as **any** car.

—And is perfect in each **detail** of construction.

—Doing just as well on the road and **standing up** to **wear** and **tear** just as well as the **extravagantly high-priced** cars.

Know this for **yourself**, Mr. Business Man.

Get **demonstrations** of the high-priced cars.

Then form **your** opinion in a demonstration of the **Mitchell.**

The Mitchell agent will be glad to take you out for 50 or 100 miles any day.

Call him up—you are placed under no obligation.

$2000

Just say "Show Me"

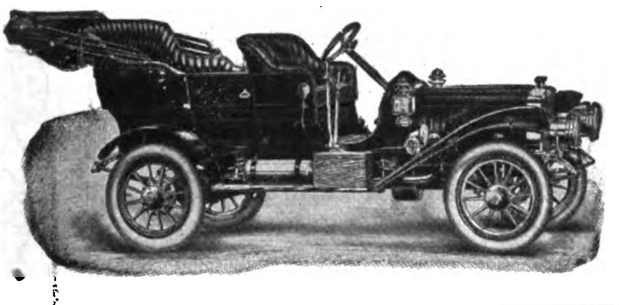
He'll answer with the **car**—show you a "**silent** argument" that will convince you.

Write for letters proving that the Mitchell is the most economical car to **operate**, and for catalog No. 18, picturing and describing the Mitchell Touring Car $2,000, Limousine $2,800, Roadster $1,250, and Runabout $1,000.

Touring Car shown here—5 passenger, 35 h. p., 4 cylinder, speed 50 miles, finished in Mitchell blue—a very neat and extremely desirable car from radiator to tail light.

Mitchell Motor Car Co., 285 Mitchell St., Racine, Wis.

Standard Manufacturers,
A. M. C. M. A.



Mongrel or Thoroughbred?

NOW IS THE TIME for you, Mr. Thoughtful Dealer, to decide what you will sell in 1909.

WILL IT BE A MONGREL? a car assembled from parts carried together from all over the country and hammered into shape as well as may be?

OR WILL YOU SELL THE THOROUGHBRED—a homogeneous mechanical masterpiece, every single part of which is the result of the same genius that devised the whole?

"ASTOUNDING," "MARVELOUS," "WONDERFUL," are the terms with which some assembled cars are now tagged, though they are astounding, marvelous and wonderful only to the assemblers, who like Rip Van Winkle, have been dozing in the growing woods of automobiledom and who now, bewildered by the progress that has been going on, seize upon time-tried and long-established practices and herald their adoption by the assemblers as brand-new discoveries.

LET'S REASON IT OUT: On the one hand you have the assembled car, with an engine bought from one manufacturer, a frame from another, and a transmission from a third, and so on down to the last rivet. The maker of the engine, the mill in which the frames are pressed, the transmission man, all derive their separate profits, leaving no other way to the assemblers to obtain their rewards than by skimping the quality of their "product."

AND THEY DO IT—THEY MUST! When you examine some of these astounding cars you will be truly astounded on finding that the four-cylinder engine is cast in one piece and has only two main bearings, whereas the Maxwell has four cylinders and five main bearings. You know well enough that making a motor with only two bearings is equal to leaving the engine to its own devices as far as alignment is concerned.

IT WILL BE A TOUGH JOB FOR THE DEALER to convince the purchaser who is wise that some four-cylinder engines of small dimensions will develop as high as 30 horsepower—because they can't.

MAXWELLS ARE A HOME-GROWN AMERICAN PRODUCT. The use of Maxwell features in Maxwell cars was neither a heaven-given inspiration nor the aping of foreign design, but the outcome of sound engineering sense.

WHEN 10,116 MAXWELL OWNERS testify to the excellence of their cars, all of which have been sold by Maxwell dealers, then the Maxwell proposition is one that you can't afford to pass by.

BEFORE HITCHING YOUR WAGON TO A STAR it will be wise for you to find out all about a dealership for Maxwells, the success of which is past and present, instead of lying in the dark and distant future that has swallowed so many wonderful cars that have been marvelous chiefly in their complete and rapid disappearance from the field of legitimate competition.

Benj Briscoe
President.

MAXWELL-BRISCOE MOTOR CO.

Standard Manufacturers A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

Address communications to Tarrytown, N. Y.

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WEED CHAINS

Made Perfect Scores Possible in the Glidden Tour

Had it not been for Weed Chains it is doubtful if any of the cars in the Glidden Tour would have completed the 1669.7 miles run with perfect scores.

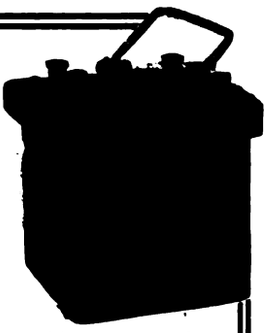
Mrs. Cuneo's telegram shown above, makes clear that it would not have been possible to travel on the wet, slippery roads without the use of Weeds.

Weed Chains when attached to your tires positively prevent skidding. They grip and hold the wheels to the road, and enable the heaviest automobile to climb hills, or negotiate in mud or sand without any trouble. They prevent lost traction, and reduce gasolene consumption. Fit any standard tires; are readily attached and detached.

Write for "THE WEED," a Bulletin

WEED CHAIN TIRE GRIP COMPANY
35 MOORE STREET, NEW YORK

The Uses of the



WITHERBEE BATTERY

are not confined to ignition alone. It provides current for side lights and tail lights, inspection lamp, limousine lights, gauge and oil-feed lights.

FOR IGNITION

It is universally acknowledged to be the most thoroughly reliable system obtainable. Endorsed by leading manufacturers and dealers everywhere. The Witherbee is the best battery made—best for ignition and general utility.

If desired Agents and Branches of this Company will fulfill any requirements of manufacturers, dealers and owners.

Wico Inspection Lamp, Wico Charging Device, Wico Ring and Roller Timer, Volta Magneto, Witherbee Batteries Wico Ignition Wire.

Witherbee Igniter Co., 1876 Broadway NEW YORK

Makers of the Famous Witherbee Battery.

DETROIT 1429 Michigan Ave. — CHICAGO 220 Jefferson Ave. — BUFFALO 720 Main St.

BALTIMORE OFFICE: 604 Continental Trust Bldg.

BEAR IN MIND

that in eight years there have been five models of Stevens-Duryea Cars. Worked out to perfection before being placed on the market — their mechanical features distinguished for being ahead of the times and because of common sense construction. Contrast the evolution of five unqualifiedly successful Stevens-Duryea Models with the every few months "improvement," radical changes, etc., in the output of some motor factories.

WHEN YOU BUY A STEVENS-DURYEA CAR YOU SECURE A MINIMUM OF UPKEEP EXPENSE AND A MAXIMUM OF PEACE OF MIND.

WRITE FOR DESCRIPTIVE MATTER

STEVENS-DURYEA CO.
690 Main Street, Chicopee Falls, Mass., U. S. A.
Member A. L. A. M.

The efficiency, economy and superiority of STANDARD BEARINGS is shown by their work in the THOMAS FLYER, AMERICA'S CHAMPION in the NEW YORK-PARIS RACE

THE VITAL EQUIPMENT

of this car as to bearings, in the transmission, jack shaft and rear wheels, consists of

SIXTEEN STANDARD BEARINGS

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PHILADELPHIA, PA.

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"Firestone" Tires

"The Tires of Sterling Quality"

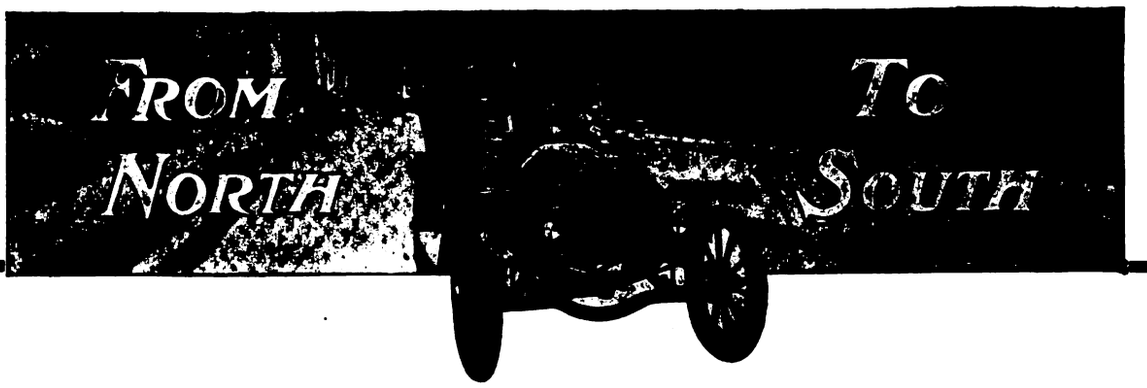
are different from other tires—distinctly different—decidedly better—their "betterness" lies in their durability and low mileage cost.

Equip one of your wheels with a Firestone tire—compare its quality and durability with the other tires.

We are confident the comparison will result in your equipping your car throughout with Firestone tires.

Branches and Agencies Almost Everywhere.

Firestone Tire & Rubber Co., Akron, Ohio



on a midwinter trip from New York to New Orleans, Mr. Ralph Owen driving an **Oldsmobile,** found in plenty, incidents and conditions of the sort that showed the kind of stuff men and things are made of.

When you stop to consider what an automobile is built and intended for, the endurance of this car is marvelous. He says:

"Between Blue Stores and Hudson the road was particularly rough and rutty, and as we were nearing Hudson one of our rear tires was wrenched off in a frozen rut which was nearly eight inches deep. At Buffalo, a thorough examination of the car was made to see if the terrible strain under which it had been the last three days had in any way decreased its efficiency, but aside from a broken spark plug, which had given us some annoyance the last ten miles into Buffalo, nothing was discovered."

This Car was equipped with TIMKEN ROLLER BEARINGS AND AXLES

Has it ever occurred to you WHY the manufacturers invariably equip the cars they pick for such trips, with **Timken Product?** There is a reason. May we give it to you?

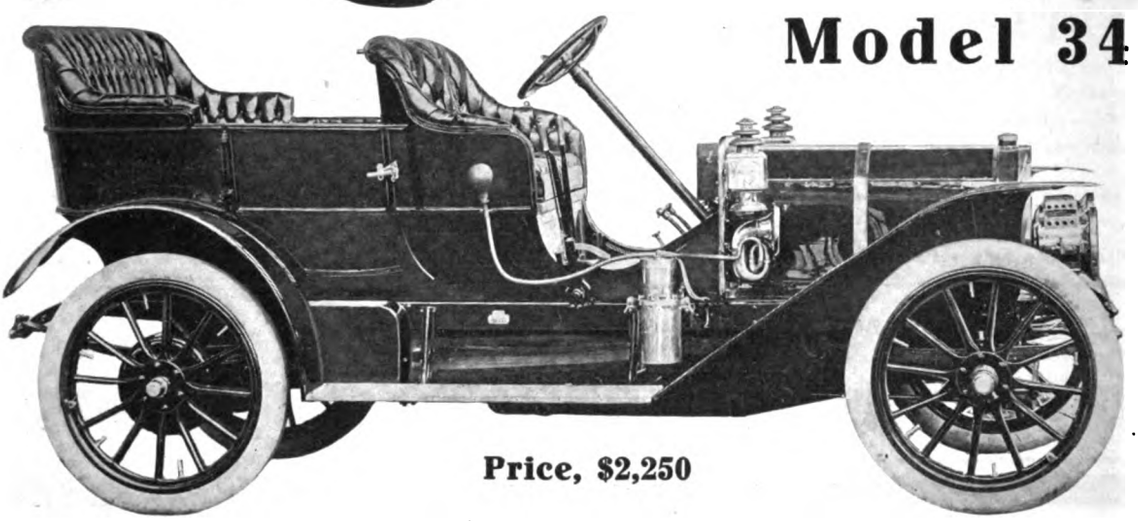
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Model 34



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The capacity of the offset crank shaft for doing this extra work is most noticeable at low engine speeds. All that power which in other engines is lost through friction on the bearings and cylinder walls, is added to the driving force by the Rambler offset crank shaft. It reduces friction; eliminates hammer and bearings; gives more power.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, August 13, 1908. No. 20

TIRE CONCERT OUT OF TUNE

Deadlock at Cleveland Meeting of the Makers—"Railroading" Methods Arouse Resentment.

Cleveland, O., Aug. 11.—Short, sharp and exciting was the session of the tire makers who gathered in Cleveland to-day to see what could be done about the plan of reducing tire cost to the consumer and of eliminating the price cutting evil. While all of the makers represented made it plain that they were in perfect sympathy with the proposed movement, the meeting itself ended in a deadlock brought about chiefly by actions on the part of the chairman which were regarded as an attempt to "railroad through" a resolution sweeping in its effects and which included clauses and conditions with which the members had not been given time to familiarize themselves. The form of the resolution, even more than its substance, was objected to, as was also the manner of its presentation with a flourish of the "big stick" and dire threats of what would happen to those who opposed it.

The effort to jam the resolution through, supplemented with a statement that both the Licensed and "unlicensed" automobile associations had pledged support, resulted in failure and defeat, despite the chairman's decree that he would make outcasts of the offenders who opposed him, by reporting their names to the automobile associations. The opposing members were incensed that the chairman should undertake to represent them as desiring to obstruct the wishes of the automobile manufacturers, when, as a matter of fact, they are in sympathy with some plan to reduce the evils of price cutting and are ready and willing to take united action, could a course be outlined that would be just to all.

The vote was a tie and the close of the meeting, which soon followed, found the manufacturers decided in going their separate ways, though indicating that they are in accord with the purposes for which the meeting was ostensibly called and will carry them out individually, without concerted action. On the question of reduced list prices all the makers were united, and action along this line is a foregone conclusion. Lessened discounts will naturally follow, though a perfectly uniform discount would seem out of the question. Representation by but one agent in a town and by none where a branch house is located created a difference of opinion and was the subject of sharp debate.

While the meetings in New York and Cleveland did not accomplish anything definite, benefits will follow in the reduction of list prices and the general improvement of trade conditions.

Takes Half of the E-M-F Output.

By an arrangement between the Everitt-Metzger-Flanders Co., of Detroit, and the Studebaker Automobile Co., of South Bend, Ind., the latter concern will undertake the marketing of half the proposed production of 12,000 E-M-F cars in the season of 1909. Studebaker outlets not only in the United States, but also abroad will be used, and as sold by the Studebaker agencies the price of the car will be $1,300 complete with touring equipment. The new arrangement does not affect the Studebaker relations with the Garford.

Logan Goes into Bankruptcy.

The Logan Construction Co., of Chillicothe, O., filed a petition in bankruptcy on Monday, August 11, showing liabilities of $120,000 and assets estimated at $69,000. The concern was organized with local capital a few years ago to devote itself chiefly to the commercial vehicle field. It was recently reorganized, but apparently without successful result.

Blomstrom to be Enlarged.

The Blomstrom Manufacturing Co., of Detroit, Mich., has increased its capital stock to $500,000. The increase is underwritten by Pittsburg capitalists. Extensive increases in the plant are contemplated.

LICENSED SESSION'S LIVELY

Buick President Scores the Members—Develops a Warm Answer—Standard Rim is Adopted.

Instead of the usually placid program, considerable heat was genrated at the general meeting of the Association of Licensed Automobile Manufacturers in New York, on August 7, by the fervid remarks of W. C. Durant, of the Buick Motor Co., who took occasion to score other members for alleged offenses of policy of which he did not approve.

He was particularly aroused by a letter which a short time ago emanated from the new Everitt-Metzger-Flanders combination in Detroit, and which, while being marked "Confidential," was extensively circulated in the trade. The letter was in the nature of a "wait-for-the-big-show" notice and incidentally made numerous and free remarks about other makers and "assembled" cars and took liberties with Durant's proposed International Motor Co. After paying his respects to the E-M-F letter, Durant turned to the Cadillac Motor Car Co., and accused it of disturbing trade conditions and of putting a heavy burden on agents with unsold cars by announcing and advertising a sensational new model so long a time in advance of its actual appearance or possible delivery. In conclusion he arraigned all the members of the association for alleged lack of co-operation and for not working together for the best interests of the industry.

When he had quite finished, Thomas Henderson, of the Winton Motor Carriage Co., undertook to call attention to the fact that it had been about two years since Durant or any of his representatives had manifested enough interest in the meetings of the association even to attend, thus suggesting the possible suspicion of the very lack of co-operation to which he took exception. The speaker further recalled that one of

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the most conspicuous instances of advance notice work that the trade had ever seen was the heralding at the 1907 New York show, in January, of a light, four-cylinder, low priced Buick model for delivery some time after the following August.

H. H. Franklin, president of the H. H. Franklin Mfg Co., of Syracuse, resigned as treasurer of the association, a post he has held for the past three years. Colonel George Pope, treasurer of the Pope Mfg. Co., was unanimously elected to succeed him.

The report of the show committee was accepted, and it was decided that allotments of space at the Madison Square Garden show will be made at the next general meeting, which will probably be held early in September. It was recomended that the usual method of allotment be adopted, which is according to the amount of business done from July 1, 1907, to July 1, 1908. The decorative contract has been awarded to the S. R. Ball Co., as heretofore, and a new method of arranging the elevated platforms will give five thousand feet more floor space than in previous years. The report of the handbook comittee was also accepted, and work on the 1909 handbook will commence at once.

After discussing the new standard, universal quick detachable rim, the association approved the recommendations of its rim and tire committe, and adopted it as the standard for equipment.

Those present were: M. I. Brock, Autocar; W. C. Durant, Buick; W. C. Leland, Cadillac; R. D. Chapin, Chalmers-Detroit; M. S. Hart, Corbin; E. R. Hewitt, Hewitt; A. N. Mayo, Knox; S. T. Davis, Jr., Locomobile; V. M. Gunderson and W. E. Metzger, Northern; F. L. Smith, Olds; M. J. Budlong, Packard; L. H. Kittridge, Peerless; C. Clifton, Pierce; Geo. Pope, Pope; G. E. Mitchell, Alden Sampson; R. H. Salmons, Selden; F. B. Stearns, Stearns; I. H. Page, Stevens-Duryea. A. W. Church and O. G. Bechtel, Waltham; Thomas Henderson, Winton.

Stepney Agency to Dissolve.

A temporary receiver has been appointed by Justice Goff of the Supreme Court for the Stepney Spare Wheel Agency, of 341 Fifth avenue, New York City. An order to show why the corporation should not be dissolved was set down for September 28, following an application for voluntary dissolution by the directors, who allege it to be insolvent. The corporation has no direct connection with the Spare Motor Wheel of America, Ltd., at Chicago, the makers of the Stepney wheel.

Fatal Explosion at Auto Gas Plant.

An acetylene gas explosion on August 6, at the Auto Gas plant in Albany, N. Y., completely wrecked the building and in addition to blowing the right leg off John B. Harrison, the manager, killed John Malone and William Fort. Malone's body was found in the debris of the factory while Fort, who was across the street mowing his lawn, was crushed by a flying gas tank. Great damage was done to neighboring buildings, while the loss at the plant, which is operated in connection with the Avery Portable Lighting Co., of Milwaukee, was over $20,000.

The Week's Incorporations.

Aurora, Ill.—Sommer Motor Co., under Illinois laws, with $25,000 capital. Corporators—Willis H. Baker, L. A. Sommer, Harold F. White.

Richmond, Va.—Gordon Motor Car Co., under Virginia laws, with $5,000 to $25,000 capital; to conduct automobile transfer business. Corporators—J. O. Hayes, W. F. Gordon, E. D. Hotchkiss.

Camden, N. J.—Chalmers Detroit Motor Co. of Philadelphia, under New Jersey laws, with $25,000 capital; to manufacture automobiles, etc. Corporators—F. R. Hansell, W. F. Eidell, J. A. MacPeak.

Hempstead, L. I.—New York Auto Supply Co., under New York laws, with $12,000 capital. Corporators—Benjamin D. Underhill, New Canaan, Conn.; George H. Sprague, George T. Sprague, Hewlett, N.Y.

Brooklyn, N. Y.—Interborough Garage Co., under New York laws, with $20,000 capital. Corporators—John F. O'Donnell, Pierce W. Grace, 44 Court street; Thornton J. Theall, 215 Montague street, Brooklyn, N. Y.

Warren, O.—Hitchcock Motor Co., under Ohio laws, with $20,000 capital; to manufacture and repair automobiles. Corporators—J. A. Hitchcock, W. H. Creahen, Herbert E. Craig, T. M. Burton, S. E. Wannamaker.

New York City, N. Y.—Elite Motor Service Co., under New York laws, with $100,000 capital. Corporators—William H. Barnard, 54 Howard stret; Willis B. Troy, 262 West Seventieth street. Edmonds Putney, 2 Rector street, New York City, N. Y.

Passaic, N. J.—Foxhall-Wilson Co., The, under New Jersey laws, with $5,000 capital; to manufacture and sell bicycles, automobiles and hardware supplies, etc. Corporators—Thomas Foxhall, Clarence A. Wilson, George H. Dalrymple.

New York City, N. Y.—City Motor Service, under New York laws, with $50,000 capital. Corporators—George A. Melbourne, 500 West 122d street; H. C. Fuller, 2783 Broadway, New York City, N. Y.; M. A. Doyle, 16 Butler street, Brooklyn, N. Y.

Bristol Begins Getting Busy.

The Bristol Engineering Co., of Bristol, Conn., which is to make motor cabs for the American Taxameter Cab Co., has started operations, F. E. Moskovics having brought over a number of draughtsmen and others from Kingston, N. Y., and set them to work in the new factory building on North Main street. The chief work that will be done in Bristol at present will be assembling, but parts making will be taken up later.

The American Taxameter Cab Co. itself has completed its organization so that the list of officers is now as follows: T. H. McInnerney, president; L. H. French, vice-president; W. B. Hurlburt, treasurer, and C. R. Teaboldt, secretary. The name of Frank A. Merrall, of Acker, Merrall & Condit, New York, has been added to the directors' list.

Philadelphia's Show Plans.

Dates for Philadelphia's automobile show have been fixed upon as January 23 to 30, and an effort will be made to obtain the Academy of Music instead of the First Regiment Armory which has been used heretofore. The Philadelphia Automobile Trade Association held its meeting last week, and put the control of the show in the hands of a committee consisting of President J. A. Wister, of Gawthrop & Wister; W. F. Smith, manager of the Philadelphna Rambler branch; and E. H. Fitch, local manager of the Diamond Rubber Co. The active management will be in the hands of J. H. Beck, as in former years.

Trade Tickets at Palace Show.

Details of the Grand Central Palace show, which opens on New Year's eve, were the subject of meetings on the part of the show committee of the American Motor Car Manufacturers' Association last week. The main floor and part of the first gallery will be occupied by American and foreign pleasure vehicles, and the taxicab division will be on the first balcony along with the commercial vehicles and motorcycles. The accessory makers will be on the first and second galleries. A liberal trade ticket plan for exhibitors has been decided upon.

Babcock to Make a Buggy Type.

A buggy type of automobile will be a new Watertown (N. Y.) product in the near future, the H. H. Babcock Mfg. Co. having decided to enter the field. Gears and motors for the trade are also to be made in the new factory which is being built adjacent to the company's other buildings.

Gramm Starts His Own Concern.

B. A. Gramm and Fred Bisantz have severed their connection with the Logan Construction Co., of Chillicothe, O., to devote themselves to the Gramm-Logan Motor Co., which Gramm has formed. A factory in northern Ohio has been chosen and work will commence within a few days.

Will Produce Motor Car Parts.

The Jackson, Church & Wilcox Co., of Saginaw, Mich., which has for some time been engaged in the manufacture of iron and steel products, has decided to take up the manufacture of automobile parts. To this end it is erecting a large factory supplementing its present buildings.

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STANDARD RIM IS APPROVED

Experts from Associations of Car Makers Unite on a Design—Details of Construction.

After two years of delay and interruption, the project for a standard quick detachable rim for general adoption by American automobile makers has assumed definite and concrete form. A new rim, differing in detail from any of the rims now on the market has been evolved, and has met with the approval of special committees appointed to investigate the subject by the Association of Licensed Automobile Manufacturers, the National Association of Automobile Manufacturers, and the American Motor Car Manufacturers' Association.

Efforts were made about a year ago to have the makers agree on one form of rim, but were discouraged to some extent by President Cutler of the Licensed Association, who took the the position that his association could not bind its members to adopt any particular style, even if it were selected by all the special committees. Despite the rivalry of the various rim makers and tire concerns, these interests have all along expressed themselves as ready to cooperate for a standard rim when the car makers as a whole could themselves decide on one and would back their decision with equipment orders.

The Licensed Association, whose Mechanical Branch is largely responsible for the form of rim which is now offered as the standard, has accepted the report of its special rim committee, and will urge the adoption of the new rim on all its members. Other large makers will be reached through the American Motor Car Manufacturers Association and the National Association of Automobile Manufacturers, the lesser and unattached manufacturers being depended upon to come into line through trade expediency and example.

In general construction the rim adopted follows certain principles which already have been approved through direct service in other devices of the sort. The main section comprises the base or rim proper and the inner flange, which is permanent. The outer flange is formed by a removable flange or ring, which is reversible, while this, in turn, is held in place by means of a second and locking ring. The latter is broken at one point in its circumference, while a tongue formed on its lower side, is arranged to interlock with a recess in the rim, by which it is secured from rotating about the latter and from springing out of position.

Two points of absolute novelty are to be found in the arrangement. One is the formation of the removable ring in such a way that in either of its two possible positions it forms an exact counterpart of the opposite flange without any break in its continuity. The second is the use of a locking ring which, instead of being of uniformly oval section, is recessed by the formation of a right-angled groove in its upper and inner side, in such a way as to permit the side ring to overlap it. In this way the latter is provided with a very broad seating



STANDARD RIM AS USED FOR CLINCHER TIRES

on the rim, while the contrivance also assists in the retention of the locking ring.

The rim is universal in that it will accommodate any tire of standard dimensions of either the clincher or Dunlop types. As shown in the accompanying illustrations, the method of adaptation to these two constructions is made plain, as is the sectional shape of the rim itself and the removable



STANDARD RIM AS USED FOR DUNLOP TIRES

flange and locking rings. For the accommodation of the Dunlop type, it will be observed that the outer flange is merely reversed and replaced, while the hollow of the permannt inner flange is adapted by the use of a special rubber filler ring.

In either position the removable flange is equally secure, and its method of manipulation is the same, so that there is no difficulty in changing from one to the other.

GETS BIG ROYALTY PAYMENT

Electric Vehicle's Coffers are Swelled by Selden Settlements—Report of the Receivers.

The bank account of the Electric Vehicle Co., of Hartford, was materially increased in July, according to the report filed by Receivers Halsey M. Barrett and Henry W. Nuckols, by the payment of Selden royalties by members of the licensed association, the receipts from this source being $236,915.77. This figure in a general way indicates the amount of royalty paid by the licensed concerns for the period from October, 1907, to July, 1908.

As the royalty paid under the Selden patent is 1 per cent. gross of the value of the cars sold, less 20 per cent, for cash in 15 days, the business done from October to July by the members of the licensed association is approximately $24,000,000. The licensed association gets two-fifths of the amount paid to the Electric Vehicle Co., and a payment of $95,533.59 to the association on the Selden patent account is shown by the report. Of its remaining three-fifths, the company has to pay George B. Selden himself a share, and a July payment of $11,776.68 under this arrangement is recorded.

The receivers' report is as follows:

Sales.

Charges on account and cash sales	$33,803.76

Purchases.

On account	$5,836.96
Cash	148.47
	$5,985.43

Cash Statement.

Cash on hand July 1, 1908	$121,196.64
Cash collected on E. V. account	86.03
Cash collected on rec. account	31,968.02
Selden royalty	236,915.77
	$390,166.46

Disbursements.

Pay roll	$13,404.72
Trading expenses	50.00
Principal creditors	14,092.89
Freight and expenses	122.24
Commissions	100.00
Petty cash	148.47
Telegraph and telephone	10.09
Storage	75.00
G. B. Selden	11,776.68
A. L. A. M.	95,533.59
Taxes	12,082.55
	$147,396.23
Cash receipts	$390,166.46
Cash disbursements	147,396.23
Balance on hand Aug. 1, '08	$242,770.23

Coey's Taxicabs Destroyed by Fire.

Over 50 automobiles and taxicabs were destroyed by fire Wednesday, 12th inst., at the garage of C. A. Coey & Co., 1710-1718 Indiana avenue, Chicago. Coey's insurance was $11,000, which was but a small part of the total loss.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, AUGUST 13, 1908.

The Need of a Standard Rim.

With the placing in nomination of a new candidate for the long-sought standard quick detachable rim for general use, and evidence that it may receive the official sanction of the three great manufacturing organizations, renewed emphasis is placed upon the importance of arriving at some definite conclusion in the matter. Tire construction offers many perplexing questions for decision, but perhaps none of greater present importance than the question of attachment. The introduction of the several types of quick detachable rim in present use has proved one of the greatest blessings the user has yet received. But not until it be possible to recognize a truly universal rim will the blessing be complete.

Of all the vexed problems which have followed in the train of the automobile, the tire problem has proved the most difficult of solution. Its vital nature in the matter of the expense of car upkeep assumes greater significance as the other items of expense are reduced through improved methods of construction. Furthermore, as it serves to reduce time losses on the road as well as labor and inconvenience, the importance of the quick detachable type increases in equal ratio. The facts that by its use the number of tire failures due to improper manipulation is decreased and that less skill is required in handling it than in the use of the plain clincher type, also count tremendously in its favor.

That the adoption of a satisfactory universal method of construction, however desirable it may be, is not a simple matter, is in no way better evidenced than by the fact that the question has been under expert consideration for two years without any definite conclusion having been reached. Nor is the difficulty wholly one of the accommodation of a number of conflicting manufacturing interests. In the purely structural sense, the problem offers many obstacles which are not to be surmounted readily. Many of the otherwise effective solutions which present themselves are useless for the purpose because of the particularly arduous duty which is thrown upon the rim; its exposed location, the severe and varied stresses which it must resist, and the unavoidable presence of quantities of dirt, mud and grease. The truly successful rim must be a marvel of simplicity and security.

Once developed and introduced, however, there can be no question of the cordiality of its reception. Whatever may be the limit of advisable standardization in automobile construction, it is unquestionable that all tires should possess the virtue of absolute interchangeability.

Rural Free Delivery and Good Roads.

In the spread of the good roads movement the fact must not be lost sight of that the Rural Free Delivery of the mails may be made an effective weapon of advancement. Just as the carriage of the mails on railway trains has been made an important factor in the development of the fast schedule, the improved facilities for handling the farmer's budget of correspondence and his papers which the good road presents in conjunction with the free delivery route of the country may be turned to good account. The motor vehicle is coming to be of recognized importance to the rural letter carrier, and the amount of time which he is enabled to save by its use constitutes a virtual reduction of the distance between the farm and the town. Yet the efficacy of the motor vehicle depends to a great extent upon the condition of the highways over which it must be driven.

When the farmer learns that his own neglect of the highway problem must involve a break in the regularity of the postal service at certain seasons of the year, he is destined to be aroused to the value of overcoming the obstacles which interfere with it. Furthermore, the likelihood that in time, the post office department may come to regard neglect of the highways over which its routes are laid as interference with its business, should hold out additional inducements for the development of automobile mail service. It is difficult to conceive of any single line of progress more comprehensive in its effects that that of the rural free delivery. And where its application may be made to affect the automobile industry as well as the automobilist in so general a way, no pains should be spared to work for its further spread.

Value of the Production Engineer.

In the light of the rapidly increasing movement for multiple production in the industry, the importance of the production engineer is rapidly becoming augmented to a point of absolute supremacy in the manufacturing department. Both in the matter of parts and complete machines, facility and economy of production are receiving constantly increasing valuation. The very design of the machine is made to a degree, subject to the ease with which it lends itself to the tools of the builder, and just as the construction of the special tools required for any of the modern processes forms one of the most vital elements of the process, so the man who is capable of originating those processes and tools is granted a mark of consideration to which he is justly entitled.

The peculiar aptitude which enables him to see in any given finished part not an element in a complex machine, but a problem to be solved—the product of a number of possible methods of evolution from the raw—and the nice discrimination which enables him to choose from several such methods the most economical and satisfactory one, are gifts developed by long training and special qualifications, which enable the true production engineer to assume a position of command and earn the high regard which is his justly earned reward.

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In the automobile field is manifest a growing tendency to recognize the importance of this office and to depend upon its services. In many instances the task of laying out the work of production is not relegated to any one man, but is evolved in consultation. In others, it falls upon the shoulders of an overworked superintendent and receives only such attention as he can spare for it. It is a mark of growing industrial efficiency, however, that the number of plants which are being worked upon a more liberal basis is increasing rapidly.

That some of them are attracting men from outside the confines of the industry itself—men whose training has been entirely in lines where rapid and accurate work on a large scale has become a specialty, but adds another point to the argument that the business of making and selling automobiles is fast assuming well regulated proportions and that it presents a constantly broadening field for skilled engineering talent.

Again it appears that the only satisfactory solution of the touring contest problem rests in the adoption of automatic, mechanical observers. The recording speed ometer-odometer, or some device of its class, would record the speeds and running times of the cars with mathematical precision. The calculation of results, decisions as to questions of technicality, and all protests, would be left to the discretion of the judges. The human element of the ignorant or erring individual nominated by the contestants to fill a necessary place in the program and carry on duties of a doubtfully welcome character would be avoided, and the tourist and his party would be left to themselves. Why this idea has received no more than casual attention hitherto, is difficult to conceive.

A point of advantage of automobile travel over that which may be accomplished by railroad is that where the train follows its iron trail through winding valleys and under the hills, the automobile overtops it, and follows the sky-line. The better view, the better air and the spirit of freedom and conquest are thus a potent factor of enjoyment to the tourist who uses the modern method of transportation. That he may secure these advantages at wonderfully low cost, all things considered, and with no material sacrifice of bodily comfort, but adds to the pleasures of the tour.

CHICAGO AND M. A. M. MEMBERS

Show Situation Worries Accessory Men Who Want to Exhibit—N. A. A. M. Will Not Yield.

Considerable trade speculation has been set astir as to where the Motor and Accessory Manufacturers, Inc., is going to find itself as a result of the action of that part of its membership which gathered at Atlantic City, in taking the position that the whole association must refuse to exhibit at the Chicago show unless further special price concessions are made on space. Since a great part of the membership of the M. A. M. is drawn from firms who belong for practically no other reason than to get advantageous show space through the brokerage of the association, not a little uneasiness has been created among them as to how they are going to get out of the difficulty in which they have been placed so far as exhibiting at the National Association of Automobile Manufacturers' show in the Windy City is concerned. As the latter association has already made it plain that it will not reduce the price of space, the members of the accessory association must either stay out of the show or brave the possibility of not being permitted to exhibit in the M. A. M. space allotment at the New York shows.

Several of the larger members of the association are already devising methods for circumventing the full effects of the situation, arranging a plan by which their products will be well represented at Chicago without imperiling their rights to M. A. M. space at the New York show. Others, who are not satisfied at having to resort to measures of this kind, give intimations of revolt against the action at Atlantic City and some very frank expressions of opinion are being given. One prominent maker of accessories expresses great surprise that the association should antagonize the automobile manufacturers by demands for further concessions, particularly as the price of space at Chicago is lower than at the New York shows.

"At the Madison Square Garden show," he said, "we pay from $1.55 to $1.75 a square foot, participating in whatever dividends are declared, on the same basis as the Licensed car exhibitors, while at the N. A. A. M. show in Chicago we pay only 90 cents a foot, with 15 cents rebate to our association. As the Chicago show is the biggest of the lot, and will probably have more visitors than any of the other shows by reason of the fact that fully 60 per cent. of all the automobile business of the country has been done in the Middle West this year, there are a great many of us who feel that we want to show there if anywhere and are perfectly willing to pay the price. As things stand now, the M. A. M. would prohibit our exhibiting there under penalty of disbarment from M. A. M. space at the other shows, and we are decidedly up against it.

"To have a traveling salesman like Fred Castle introduce a resolution that binds us all against showing at Chicago unless the M. A. M. gets a bigger divide with the automobile makers seems bordering on presumption, as there is a whole lot of doubt as to how far such a traveling salesman can be thought to represent the wishes or disposition of the manufacturers in the association, not even excepting the firm he works for."

That the automobile makers are in no mood to knuckle to the demands of the accessory association is very evident from the terms in which members of the N. A. A. M. show and executive committees discuss the ultimatum which the M. A. M. has chosen to make.

"These accessory makers had their case passed upon long before they go up their unofficial ultimatum," said an automobile manufacturer who is a chief in the N. A. A. M. councils. "At a meeting some time back, we discussed the status of the accessory exhibitors and decided emphatically at that time that they were entitled to no more concessions than they had already received. In fact many of the automobile manufacturers thought we were treating them altogether too liberally. If they attempt to interfere with the success of our show at Chicago, it will have no harmful effect on us, as the space can readily be sold at much more profitable figures."

COMING EVENTS

August 14, Algonquin, Ill.—Chicago Motor Club's third annual hill climb.

August 15, Rochester, N. Y.—Rochester Automobile Club's annual gymkhana contest at Genesee Valley Park.

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

September 5-9, Los Angeles, Cal.—Automobile Dealers Association's reliability run to San Francisco.

Sept. 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7, Lowell, Mass.—Lowell Automobile Club's 200 miles road race, on Merrimac Valley boulevard.

September 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7-12, Hartford, Conn.—Connecticut State Fair Association's outdoor show and grand circuit races at Charter Oak Park.

September 11, Springfield, Mass.—Springfield Automobile Club's hill climb on Wilbraham hill.

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DEMOUNTABLE RIMS IN A CONTEST

Diamond Wins in Practical Competitive Test at Chicago—Five Contestants Meet Strenuous Conditions.

Five cars, equipped with four varieties of demountable rim, took part in the "demountable rim contest" of the Chicago Motor Club on Thursday last, 6th inst. The first event of the sort to be held, it furnished an unusually happy method of comparing the respective merits of the devices under test.

First prize was awarded to the Diamond rim, its time of 5:36⅗ being composed of the added time for three changes, corrected by the addition of 24⅗ seconds penalization. Other rims tested in this way were the Continental, which was awarded second place, the Fisk and the Nadall.

The rules of the contest provided for four tire changes during the race, each of the four tires being shifted under the eye of an official observer, at different points along the famous Elgin-Aurora century course. When this test was completed, each car was required to make a special road test of the rims. Slipping and loosened bolts or nuts were taken note of and time penalties added for readjustments.

Five entrants participated. These were Diamond on an Isotta car, Fisk on a Chalmers-Detroit, Fisk on a Knox, Continental on a Packard, and Nadall on a Pierce Arrow. Comparisons at the finish showed that there was less than two minutes difference between contestants in time required for changes.

The Isotta, fitted with the winning Diamond tires, made a bad start, and lost its way on a wrong road soon after leaving Chicago. After cruising about for three or four hours, it finally rejoined the others at Elgin, long after the latter had finished. When the official examination was completed, however, this car, with its crew composed of William Kissner and George Brewer, proved to be the winner, despite ts tantaliiing experience.

The Continentals on the Packard were penalized 32 seconds due to loose nuts, while the Fisk entries came next. The latter, while getting only third place at best, won considerable glory by grabbing off the fastest single change made by any one of the contestants, dismounting and mounting a new rim in 53⅕ seconds at Ontarioville, while at Elgin the other Fisk entry recorded 54 seconds.

The Nadall demountable is a newcomer in the field and embodies some exceptional features, its particular advantage lying in the fact that there are absolutely no parts to lose and that the change can practically be made in the dark.

Diamond Demountable Rim—Isotta Fraschini car, George A. Brewer driver. Time, 1:01⅖, 1:25⅖, 1:45. 0:59⅖, penalty 0:24 . Total, 5:36⅖.

Continental Demountable Rim—Packard roadster, Jack Hessler driver. Time, 1:02, 1:58⅕, 1:05⅖, 1:10⅖; penalty 0:32. Total, 5:48.

Fisk Demountable Rim—Knox roadster, H. W. Crane driver. Time, 1:07⅕, 0:57!, 5:53⅕, 5:58⅘; penalty, 1:53⅕. Total, 5:59⅘.

Fisk Demountable Rim—Chalmers-Detroit roadster; W. F. McCarthy driver. Time, 1.11⅗, 0:57, 1:01⅕, 0:54; penalty, 3:06⅖. Total, 7:10⅕.

Nadall Demountable Rim—Pierce; Paul Hoffman driver. Time, 2:02⅖, 1:17!, 1:25⅖, 1:29⅘; penalty, 1:20⅘. Total, 7:35⅘.

Planning Welcome for Thomas Crew.

Suitable demonstrations of joy and welcome are to be given George Shuster and George Miller, the triumphant drivers of the New York-Paris Thomas car, when they and the machine arrive in New York. They will come on the Lorraine and are due about August 18. The Harry S. Houpt Co., New York agents for the Thomas, will conduct an elaborate jollification, and Thomas car owners from all over the East will participate in the festivities. Delegations from the E. R. Thomas factory at Buffalo will also be present, and parades and other "doings" will arouse the public to "see who's here."

Because Diamond tires were used on the Thomas throughout its journey, the Diamond Rubber Co. feels its proportionate share in the victory, special commendation of the service the tires rendered having been given publicly by the Thomas people.

Lee Speediest on Chapel Hill.

Five events constituted the program of the hill climb on Chapel hill, New London, Conn., on the 1st inst. Incidentally the occasion afforded an opportunity for Corbin cars to come very close to making a clean sweep. That the opportunity was seized is shown by the results of the meet, for four events were won by this one make of car, which was not represented in the one other number on the program—the Class A event for cars selling for less that $1,200. In the free for all a new record for the hill was established by Arthur S. Lee, who drove a 30 Corbin, owned by H. B. Kenyon, of Eastern Point, up the incline in 1:12⅖, clipping ⅘ second from the former record.

Torrington Motorists Form Organization.

Motorists of Torrington, Conn., and vicinity have organized under the name of the Litchfield County Automobile Club. The following officers have been elected: President, N. D. Holbrook; vice-president, John N. Brooks; secretary, W. P. Norton, Jr.; treasurer, G. E. Cole. The club will join the Connecticut Automobile Association, and through that organization will be affiliated with the American Automobile Association.

STIFF COURSE FOR A CLIMBFEST

Wilbraham Hill Selected for Springfield Meet on September 11—Good Roadway but Very Heavy Grades.

One of the most severe tests ever offered to automobiles is now being prepared by the automobile club of Springfield, Mass., which became especially prominent in automobile circles through its being the first city to have a good roads convention and which is one of the livest automobile cities in the country. This test is to be a hill climb on Wilbraham hill, September 11. The course that is now being prepared will be one mile long and almost straightaway, without any of the dangerous curves that have marked other hill climbing courses, such as Giant's Despair in Wilkes Barre, Pa., or Dead Horse hill in Worcester.

The main features of this course will be the grades which will range from 8 to 22 per cent. The length of the hill is 5,280 feet, with a rise of 451.1 feet. The steepest grade is 22.1 per cent. and the average grade 8.58 per cent. Just before striking the 2,640 foot mark, the cars will get a down grade of 2 per cent., which will help them gather headway for the steepest part of the hill.

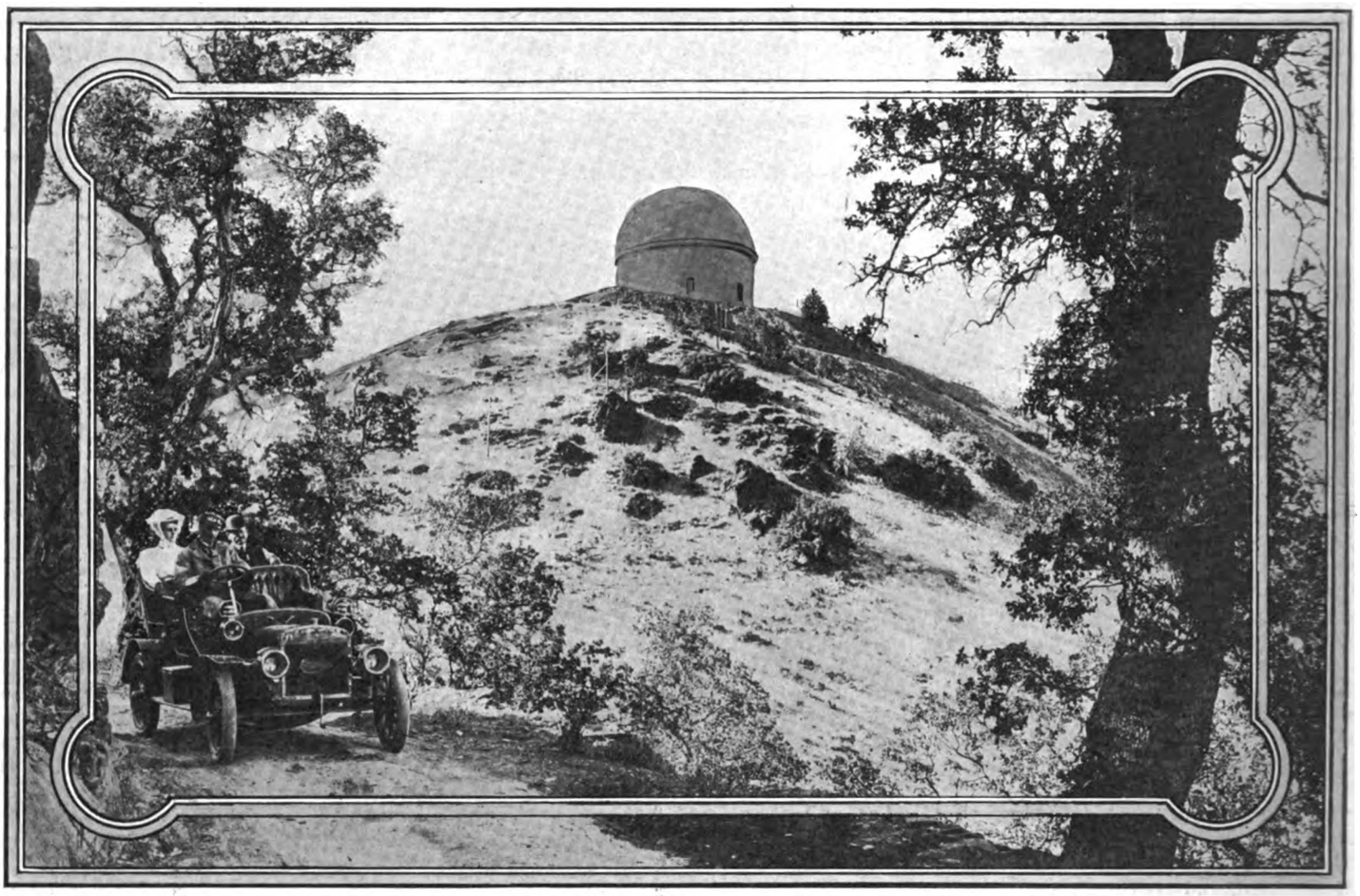
Originally, there was a wicked turn in the hill which, if left, would have made the climb prohibitive, but this turn is being bridged and other repairs are being made on the hill by the local club and when finished, the course will be as straight as the proverbial straight and narrow path. However this regularity of course and smoothness of roadbed which the club will make a feature of the course does not in any measure reduce the difficulty of the proposed climb.

The club has received from the American Automobile Association the necessary sanction, and since that time the committee in charge has been hard at work perfecting the plans. Although the list of events and prizes has not been prepared as yet, President Mark Aitken, of the club and one of the prime movers in the proposed climb, has announced that he will offer a handsome silver cup to be known as the President's cup, for the fastest time made on the hill, regardless of the event. This offer will enable some fast car to win two prizes instead of one and to also have the honor of making a record on Wilbraham mountain, which honor will be well worth winning without the cup.

As an ideal spot for an automobile contest, Wilbraham mountain probably has no equal. Within easy access from the city proper, it has a most picturesque location. There is ample room for cars of the contestants, visitors and the gathering of spectators on foot that always turn out for such an event. Several years ago this club held an automobile hill climb and the experience

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AUTOMOBILE STAGE LINE TO A MOUNTAIN TOP



Climbing steep mountains with the motor car is getting to be child's play. This was demonstrated on the last two Glidden tours and the question now is: "Where will the automobile go next?" It would seem that there is no limit or restriction to its possibilities. Nature may have erected a sign, "No Admittance," in places for a time, but the American tourist with his American car does not believe in "signs." The canyons and heights of the Golden West that the short-story fine-writers glory over in the popular magazines, no longer hold any great terrors for the motorist.

Thousands of tourists who annually visit California, have a great desire to ascend Mt. Hamilton and see the sights at the world-famed Lick Observatory. It has always meant an exceedingly long tedious trip as no ordinary locomotive could make the climb. Heretofore a stage has been the common method by which tourists reached the top, but John H. McGehee, of Letcher's garage, San Jose, Cal., an aggressive motorist, calculated that an automobile stage would be the thing. He investigated at considerable length to find a car which was capable of doing the work. The friction driven Cartercar was finally selected to tackle the stiff task in which constant "climbing" and "braking" is required. The car is doing the business.

The accompanying picture shows it at its daily work. The road has an elevation of 2,100 feet in a distance of seven miles, and passengers riding at this altitude "can count the freckles on the face of the man in the moon," according to the facial specialists out that way. Anyhow, it is a good pull for an automobile. The view was made only recently, but the perpetual snow will be noticed upon the ground and shrubbery.

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gained in conducting that affair has aided materially in the arrangement of this, so that there is every promise that the climb will be successful.

The committee in charge of the climb comprises the following members. Mark Aitken, Arthur A. Adams, Albert E. Lerche, J. Walter Norcross and Merrill T. White.

Chicago Fails to Get Sanction.

That the American Automobile Association does not wish anything to detract from the interest in the Vanderbilt Cup, is evidenced by its failure as yet to grant a sanction to the Chicago Automobile Club to hold the contest for the Jefferson de Mont Thompson cup over the Indiana course in the fall. With Savannah competing with the Vanderbilt for prestige, the Three A's evidently feel that one big road race under its own auspices is sufficient for the rest of this year. That such a project would be better received in connection with an early 1909 date, is to be inferred.

When the office of the association was consulted for information on this subject Wednesday, a non-committal reply was received. The latest issue of the Journal of the Chicago Automobile Club comments on the matter in a manner that indicates that the question is not settled. It says:

"Plans of the Chicago Automobile Club racing board for a speed classic over an Indiana circuit next fall have come into sharp collision with the Vanderbilt race. The outcome is at present uncertain."

Muskegon Holding Floral Parade.

"Old home week" in Muskegon, Mich., which now is being celebrated, is to be the occasion of a big automobile floral parade which will take place to-day (Thursday). About 2,500 former residents of the city have returned to their native place and arrangements for their entertainment have been elaborated.

The Auto Club of France finds that receipts for this year's grand prix competition at Dieppe totalled $100,000. The expenditures were $72,000.

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CURTAIN RAISER FOR SAVANNAH

Race for Light Cars to Precede the "Outlaw" Grand Prize Event—Two Hundred Miles the Distance.

Plans have been prepared by the contest committee of the Automobile Club of America for a 200 miles race for light cars, to be run in connection with the Grand Prize race to be held at Savannah on Thanksgiving Day. This will be patterned after the Voiturette race held on the Dieppe circuit in France, on the day preceding the recent Grand Prix contest there. It will be held over a 10 miles parallelogram circuit, running for the greater part over a section of the main 28-mile course.

Henry Souther, chairman of the Technical Committee, has announced the conditions for the event, which will be held a day or two, or perhaps a week, before the 400 miles contest for racing machines. All entries must have a minimum weight of 850 pounds and 3¼ inches has been fixed as the maximum bore for four cylinder motors. For motors of other types an equivalent effective maximum area has been fixed in accordance with the following table, which allows for motors of from one to eight cylinders:

For Four Cycle Motors.

	in.	mm. of bore
For one cylinder	7.50	190.8
For two cylinders	5.30	135.1
For three cylinders....	4.33	110.1
For four cylinders	3.75	95.4
For six cylinders	3.66	77.7
For eight cylinders	2.65	67.4

For Two Cycle Motors.

For one cylinder	6.35	160.0
For two cylinders	4.50	114.0
For three cylinders	3.65	92.0
For four cylinders	3.18	81.0
For six cylinders	2.58	65.0
For eight cylinders....	2.24	56.0

The 850 pounds weight limit was arrived at by the Technical Committee, after a thorough investigation of the various light cars now on the market and this weight of entrants will be considered in the same manner as large cars; that is, stripped for racing trim.

The purpose of the proposed event is the laudable one of encouraging the development of small four and two-cylinder cars and also two-cycle engines. Many manufacturers are now building these small machines, it is explained, and would enter into contests more freely if the performances of the lighter product could be shown to advantage and not snowed under by the more exciting and sensational exhibitions of larger, higher powered cars.

To encourage entries it is announced that tryouts will not be confined to one or two hours in the early morning, as is the case on Long Island. But beginning October 1st. the course will be patrolled and placed at the disposal of candidates for four hours each day. According to the publicity bureau of the A. C. A. enough American entries are expected to warrant holding an elimination race for the Grand Prize candidates, as the latter "big" event is limited to 25 cars.

Outside the confines of the club, however, it is believed there is no need to worry on that score, as it is questioned whether the entry list of domestic cars will swell to any such extent. Due in a large measure to the fact that the Savannah meet is to be held in opposition to and without the sanction of the A. A. A., iti s expected the entries will be considerably restricted.

Gymkhana Scheduled at Rochester.

Plans have been completed by the Rochester (N. Y.) Automobile Club for the annual gymkhana which is to be held on Saturday next, 15th inst., at Genessee Valley Park. Twelve events will constitute the program, and as usual, considerable novelty will be injected into the affair.

In the 100 yards dash the contestants will drive with the wheels running on narrow strips of wood. The driver going the longest distance without leaving the track in the fastest time will be declared the winner. In the "hospital contest" a dummy will be thrown in front of a car moving at the rate of 15 miles an hour. Each car will carry a passenger, who must get out of the machine pick up the "injured" and return with him to the car which then will be driven to the "hospital" at the end of the line. The car accomplishing this feat in the least time will be declared the winner.

Dates for Chicago Reliability Run.

Definite dates have been set for the 1,000 miles reliability run of the Chicago Motor Club who have named October 6th, 7th, 8th and 9th, as the days of the contest. Originally the intention was to run the event in September, but fear of the equinoctial storms caused the latter days to be selected. Another reason which prompted the selection of these dates was the fact of the roads in that section of the country being at their best in October. Eight entries for this event already have been received and it is expected that last year's entries, which numbered 35, will be exceeded. The club will hold its third annual hill climb at Algonquin on Friday, 14th inst.

Registration Figures from Illinois.

Statistics compiled in the office of the Secretary of State of Illinois show that more than 15,000 automobiles now are registered in that State. Of this number, the month of July showed 920 new registrations, while June brought 918 into the list. The statistics show also that 118 different makes of cars were sold in the State during July.

There now are eight taximeter cab companies operating in London. The average day's income from each is about $11.20.

PURELY A TOUR OF THE TOURISTS

Only One Make of Car in Long Trip from Los Angeles—Reliability Test and Pleasuring Combined.

What is in many respects one of the most unique tours of the year started Wednesday from Los Angeles, Cal., under the auspices of the Auto Vehicle Co. of that city, the makers of the Tourist cars. It is purely a Tourist run and besides affording a measure of diversion for the entrants, it serves the purpose of demonstrating the strength of a purely local concern, which, from a comparatively modest beginning, has developed considerable strength on the Pacific coast.

The "tour of the Tourists," as the promoting company designates the reliability run, will be over a course slightly more than 1,000 miles in length and will consume 11 days. The longest day's ride will be 162 miles, and the shortest 55 miles, from San Jose to San Francisco. The itinerary provides for a two days' stop in San Francisco, and one day in Del Monte, where a special program has been arranged for the entertainment of the entrants.

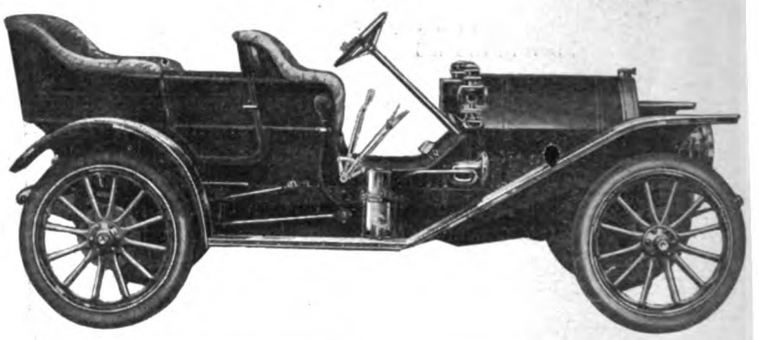
The itinerary and time table of the run is the most complete thing of its kind that has been produced. It is a double page folder much in the form of a ledger sheet, the divisions on the pages provide space for printing the schedule running time from point to point, the distance between places, the total miles from the starting point; and the schedule of the pilot car. A wide column is devoted to "remarks," and under that head are printed brief comments calling attention to the historical incidents connected with the location, warnings of grade and crossings, road information and comments on the strictness with which local road laws are enforced. Gasolene stations are designated, and the folder contains other information of use to the tourists. Accompanying the folder is a booklet giving an epitome of the laws governing the operation of automobiles in the State and the regulations in force in the cities of Los Angeles and San Francisco.

In addition to the usual complement of officials, doctors, committees, etc., who are to be found with many runs of this nature, the tour is unique in that it has as a part of its makeup an "official" mixed quartet, and their accompanist. There is an entertainment committee to provide amusement for the travelers and an historian to make record of the events, that future generations may learn of the glories and accomplishments of the "first annual tour of the Tourists." The affair is planned, not as an endurance trial for men, but on a time schedule which should easily be adhered by a touring car with a full load, traveling solely for pleasure.

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1909

Overland Tourist



Model 32—$1,500.00

SPECIFICATIONS

4-cylinder vertical motor, cast singly.
Bore 4, stroke 4½.
H. P., 30.
Lubrication—Mechanical oiler. Positive driven.
3 point suspension.
Water cooled, Thermo syphon.
Spark and throttle control on top of steering pillar.
Double system of ignition with high tension magneto.
Three speed selective transmission on rear axle.
Shaft drive bevel gear.
Internal expanding and external contracting brakes on hubs.
Wheels 34x3½ in. Artillery type.
Goodyear Q. D. Rims.
Water capacity, 5 gallons.
Gasoline, 12 gallons.
Weight, 1,900 lbs.
Wheel base, 110 in.
Tread, 56 in.
41 in. half elliptic front springs.
Full elliptic rear springs with involute ends.
"I" beam front axle.

The model 32 will undoubtedly prove the sensation of a sensational year. This car is in every way equal to machines which have hitherto sold in the neighborhood of $3,000. Only the very best of material is employed and the design of the car is beyond criticism.

A three-speed selective transmission will be used on this car, but it must not be taken from this that the planetary transmission used on our model 30 has not proven satisfactory—distinctly the reverse; but our representatives have urged upon us the necessity of building both types in order to enable them to cater to every class of purchasers, and we have fallen in with their wishes, thus making the Overland line the most complete on the market.

We would particularly draw attention to the fact that our cars are fully equipped for touring purposes, with the single exception of tops, and at $1,500 the model 32 Overland will be without a peer.

Model 34—6-Cylinder

We shall put on the market in September a six-cylinder car with 116" wheel base. The list price of this car has not yet been definitely decided, but it will not be over $2,000. This car has been designed to enable our representatives to take care of six-cylinder purchasers.

Watch for our announcement regarding this car, which will be made in the course of the next fourteen days.

OVERLAND AUTOMOBILE COMPANY

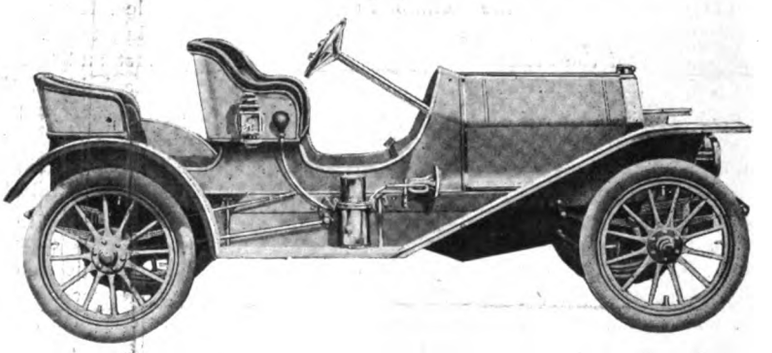
INDIANAPOLIS, INDIANA

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1909

Overland

Roadster



Model 30—$1,250.00

SPECIFICATIONS

4-cylinder vertical motor, cast singly.
Bore 4, stroke 4½.
H. P., 30.
Lubrication — Mechanical oiler. Positive driven by eccentric.
3 point suspension.
Water cooled, Thermo syphon.
Spark throttle control on top of steering pillar.
Double system of ignition.
High tension magneto, gear driven.
Planetary transmission running in oil bath.
2 speeds forward and reverse, controlled by two foot pedals.
Shaft drive bevel gear.
Internal expanding hub brakes.
Wheel 32x3½ in., Artillery type, 1¼ in. spokes.
Goodyear Q. D. Rims.
Wheel base, 105 in.
Weight, 1,600 lbs.
Tread, 56 in.
"I" beam drop forge front axle.
5 lamps, generator and horn.
41 in. half elliptic front springs.
Full elliptic rear springs, involute ends.

The model 30 is the natural development of the Overland Roadster model 24, which has been so extraordinarily successful during the present season. The car has been enlarged in every way, but its salient features have been retained, notably the pedal controlled planetary transmission. The H. P. has been increased from 22 to 30, the wheel base from 96" to 105", the tire equipment from 32"x3" to 32"x3½", a high tension magneto added to the ignition system, and headlights and generator included in the regular equipment.

Semi-elliptic springs have been substituted for the full elliptic in front, and an "I" beam axle for the tubular used this year. The engine is the counterpart of that used in model 24, excepting that the bore has been increased to 4" from 3½". The body is exceedingly handsome in design, giving easy access to the rumble seat.

We are convinced that the Overland Roadster model 30 will be even more successful than its predecessor, and this is saying a great deal, for no car has leaped into public favor with such astonishing swiftness as the Overland.

Our factory accommodation is being trebled, and we shall be in first-class shape to take care of early deliveries. We have already closed many 1909 contracts and applications from unallotted territory should be forwarded immediately.

OVERLAND AUTOMOBILE COMPANY

INDIANAPOLIS, INDIANA

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GOOD CLIMBING AT SALT LAKE

Ten Well Contested Events on Long Course —White Steamer Wins Free-for-all and Makes Best Time.

As is the usual case at hill climbs, the White steamer distinguished itself at Salt Lake City, Utah, last week. The Newhouse cup offered for a free-for-all event in the hill surmounting contest on Saturday, was easily won by Fred A. Dundee, driving J. F. Dunn's 30 horsepower stripped White touring car. The distance was 1½ miles up a 15 per cent. grade, and the steamer purred up the incline in 1:40. In the field against it were a Stearns, Stoddard-Dayton, Studebaker, Pierce Six and the "Blue Bird" racer. Following this performance, in a special match race, the same White won over a Stoddard-Dayton, making the climb in 1:40⅗.

The first event of the afternoon for electrics, went to a last-minute entry, the Fritchie, which was awarded the Keith cup, for getting over the ground in 5 minutes 10⅗ seconds, trimming a Studebaker and a Pope. The Mitchell captured the $1,000 class event without difficulty, and a Jackson got first position in the $2,000 class. In the $3,000 division, E. S. Yankee's Pope-Hartford won the equipped race, while the stripped chassis event was nipped by a Stoddard-Dayton.

C. S. Ruffuer's Stearns beat out a Stevens-Duryea in the equipped touring car event for machines listing at $5,000, and in the same class for stripped cars, a Stoddard-Dayton, entered by the Shannon Auto Co., won, making better time than two Stearns and a Studebaker.

The course extended up one of the steepest grades in the city, along Brigham street to the Government reservation. A sharp turn near the summit was calculated to supply the desired thrills for the spectators:

The summary:

Electric class—Won by Borkman Electric Co. (Fritchie); second, C. A. Quigley (Studebaker); third, A. O. Whitmore (Pope). Time, 5:10⅗.

Gasolene cars, $1,000 or under—Won by Sharman Auto Co. (Mitchell); second, Maxwell. Time, 3:38.

Gasolene cars, $1,500 or under—Won by C. S. Higson (Jackson). Time, 3:37⅗.

Gasolene cars, $2,000 or under—Won by F. S. Murphy (Jackson); second, E. D. Miller (Kissel). Time, 3:07.

Gasolene cars, $3,000 or under—Won by E. S. Yankee (Pope-Hartford); second, F. S. Murphy (Jackson). Time, 2:29⅗.

Gasolene cars, $3,000 or under (stripped touring cars or runabouts)—Won by Sharman Auto Co. (Stoddard-Dayton); second, Auto Exchange (Jackson); third, Keith Clarke (Pope-Hartford). Time, 1:53⅕.

Gasolene touring cars, $5,000 or under—Won by C. S. Ruffner (Stearns); second, T. Botternell (Stevens-Duryea). Time, 2:01⅗.

Stripped touring cars or runabouts, $5,000 or under—Won by Sharman Auto Co. (Stoddard-Dayton); second, C. S. Ruffner (Stearns); third, H. B. Lamb (Stearns). Time, 1:49⅕.

Free-for-all—Won by Fred Dundee (White Steamer); second, Sharman Auto Co. (Stoddard-Dayton); third, S. Newhouse (Pierce-Arrow). Time, 1:40.

Special match race between two first cars in free-for-all event—Won by Fred Dundee (White Steamer). Time, 1:40⅗.

Oldfield Exhibits to Kentuckians.

At the Blue Grass Fair, Lexington, Kentucky's big annual summer event, Barney Oldfield did a stunt or two in the automobile track races. Monday, August 10, was Automobile Day, and eight events for all sorts of cars were scheduled. The feature of the afternoon was the match race between Barney Oldfield, driving a Stearns, and Charles Soules, for three laps around the famous trotting track. The cars were given a flying start and Soules had the inside rail, which he held all the way. Oldfield was unable to get past him until the home stretch was reached, when the Stearns flashed ahead, winning by a length. Barney's time for the three miles was 3:17.

Later in the day, both of these drivers made mile trials against time, from a flying start. Soules circled the saucer in 59¾ seconds, lowering the record for that track, which was formerly 1:01. Then Barney did a barn-dance around the course, covering the mile in 59¼, which over-shadowed the previous time by one-half second.

According to a Louisville despatch, "the first of the automobile races for amateurs was for motorcycles." The Kirby family won this event, R. W. being first, and H. N. second in a two-mile spin; time 3:05. An Oldsmobile with Suff, of Louisville, at the wheel, cleaned up a two miles fully equipped car event, getting over the ground in 2:46.

Soules captured the free-for-all handicap at two miles, winning over a three-quarters of a mile handicap in 3:11, Oldfield failing to start in this event. Two days previous to the race meet, Barney lived up to his sensational reputation by doing his old favorite trick of plunging his car through a fence. In this, Oldfield came out victorious as usual, smashing the fence to toothpicks and retaining only a few stratches.

Kansas City Re-elects President Cowan.

With a present membership of 229, including several new names enrolled at its annual meeting, the Kansas City Automobile Club has announced the re-election of W. W. Cowan as president. The official board is now made up as follows: President, W. W. Cowen; first vice-president, Elliott H. Jones; second vice-president, W. G. Coumbe; secretary, W. P. M. Stevens; treasurer, Frank J. Dean; directors, W. G. Whitcomb, Dr. E. M. Hetherington, F. P. Ewins, G. H. Davis, J. W. McKecknie, D. E. Gudgel.

PIPE DREAM OF RACE PROFITS

Lowell Automobile Club's Chief Calculator Foresees Financial Success for Big Race—Handsome Net Result.

Despite the indications of the succeeding paragraph this is not a lesson in history, but merely an historical introduction to the story of an arithmetical calculation.

Lowell is a bustling little Massachusetts city, situated on the Merrimac river. Its estimated population of 100,000 is domiciled within an area of 14 square miles. These people pay a tax rate of -1.94 on an assessed valuation of $75,445,738. It boasts not inconsiderable manufacturing interests and—the Lowell Automobile Club.

This club intends to promote an automobile road race on Labor Day, September 7th, as already detailed in these columns, and although more than one month distant, its Chief Calculator has the race already run, mathematically and financially.

Here is the table of expenses and resources of the race that is to be—or may be—as compiled by the Chief Calculator:

Expenses.

Erecting grandstand	$4,000
Erecting bandstand	400
Erecting judges' stand	200
Telephone service, five stations around the course	300
Oiling and fixing road, not to exceed.	1,000
Wiring off road, 10 6-10 miles, labor and material	350
Banners across roadway at turns and in city at depot	300
1,000 red and white flags	50
Caps and sashes for 500 men patroling course	150
Wages for men patroling course, 500 at $2 per day	1,000
30 megaphones	15
25 men to sell tickets, programs and score cards, $2 per day	50
Printing programs and score cards, advertising in program to pay for same	00
Bulletin advertising, printing and distributing	2,000
Incidental expenses	1,000
Insurance	500
Legal expenses	500
Music	300
Total	$12,145

Resources.

9,000 seats in grandstand at $1 each.	$9,000
100 seats at $5 each	500
50 boxes seating six at $25	1,250
10,000 programs at 25c each	2,500
10,000 score cards at 10c. each	1,000
Parking 2,000 automobiles on side roads at $2.50 each	5,000
Parking space to peddlers for sale of eatables, tonics, candies, popcorn, peanuts, etc., and advertising spaces	2,000
Entrance fees, 12 cars at $250 each..	3,000
Revenue for vitagraph machines	1,000
Total resources	$25,250
Total expenses	12,145
Profit	$13,105

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ENDURANCE RUN OF AN ELECTRIC

Thousand Miles Journey Successfully Accomplished by a Runabout—Big Daily Average Over Varied Roads.

Electric runabouts, as a rule, are not expected to serve as vehicles of transportation for long distance runs. The entry in an endurance contest of a car of this description would excite more than the usual amount of comment, and while cars of this type repeatedly have made excursions to points 40 or 50 miles distant from their home city, such trips have been either experimental or have been undertaken in an emergency. But despite the reason of, or cause for, these so-called long distance trips, it yet may be asserted that a thousand mile run of an electric runabout has,



BETWEEN DETROIT AND TOLEDO

until very recently been considered an exceedingly difficult undertaking.

Such a journey has recently been placed to the credit of a small electric vehicle. Such a car has traveled from the middle west over rough roads and through hilly country to the eastern coast of the United States.

From Detroit, Mich., to New York City is an approximate distance of 1,000 miles. For an electric car to make so long a trip must be considered more or less a feat of endurance. Endurance runs for electrics had been accomplished before, but this particular journey never had been attempted until July last, when a "Detroit Electric" runabout started from Detroit, when it reached New York on the night of the 23d inst. The little car made its long journey with one set of batteries, charging, of course, along the route. The daily average was 85 miles. From New York the car went to Philadelphia and Atlantic City, from which place it will be shipped back to Detroit and placed on exhibition in the show rooms of its makers, the Anderson Carriage Co.

Two illustrations of the car on its long trip are shown herewith. In one of them may be seen the difficult roads which were encountered between Detroit, Mich., and Toledo, Ohio. The other picture illus-



HILL 20 MILES FROM ERIE

trates the car climbing a steep hill about 20 miles out of Erie, Pa. Equally adverse conditions were met from time to time during the journey and the successful completion of the trip under the conditions which prevailed is distinctly noteworthy.

Nevada Method of Road Building.

Roadmaking usually is considered a science requiring much study and the possession of more or less elaborate machinery. In Nevada, the process of building a road does not entail much book learning or the use of other than home made implements. Dr. Miller of Rawhide, who is running an auto stage from Rawhide to Schurz, makes roads by dragging timbers fitted with cutters over the desert. Twenty horses are hitched to the improvised roadmaker, which levels the sand, cuts the sage brush and makes a fairly good imitation of a road, all in one operation.

For Sightseeing in the Ogden Canyon.

"Rubberneck wagons" in the Ogden Canyon are the latest development in the sightseeing line. The automobiles will be operated over the road beginning at the mouth of the canyon and running in as far as the Oaks. The company which will operate the line has filed articles of incorporation with the county clerk under the name of the Ogden Canyon Automobile company. It anticipates liberal patronage from tourists who do not own automobiles.

PHILADELPHIA'S NEW CAB SERVICE

Quaker City Adopts the Taximeter Vehicle for Public Service—Festal Inauguration of the Local System.

Not long ago the city of Brotherly Love saw a taximeter cab skidding around Broad street. Soon another cab of the same species began to cavort around town and shared the novelty with the first one. Then another put in its appearance and things began to grow serious. But the formal introduction of motor cabs for service at the hotels and railroad stations of Philadelphia, took place on Wednesday, July 29, when President Claude S. Jarvis of the Quaker City Cab Co. held inaugural festivities. Mayor Reyburn and two score other prominent persons, political and otherwise were



PHILADELPHIA'S CAB BRIGADE

the guests of Mr. Jarvis on a short run in brand new taxicabs, to one of the city's leading hotels, where luncheon was served.

The new cabs are of American Locomotive make, have deep yellow running gear and dark brown bodies, and are similar to those of the same make in operation at the Waldorf-Astoria in New York. The motor is a four-cylinder, vertical type, 16 horsepower, and the chassis has a wheel base of 103 inches, with a 55-inch tread, and weighs with body attached, 2,600 pounds. Shaft drive is used.

Stage Line to be Extended.

Having been successful, the automobile stage line which has been in operation between Plainfield and Boynton Beach, N. J., will be extended to take in South Plainfield, Metucken, and Perth Amboy. The car, which will carry 12 passengers, will make two trips each day. It is owned and operated by the Thompson Automobile Co. of Plainfield.

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PRINCIPLES OF PATENT LAW

Legal Light on Their Creation of Monopolistic Rights—Differences Between American and Foreign Systems.

An unusually brilliant elucidation of the principles of patent law is given by Edwin J. Prindle, in a lecture delivered before the New England Society of New Jersey and recently quoted in these columns to the extent of defining what a patent really is. The monopolistic feature of the patent was the most striking point brought out in that connection.

"This monopoly," says Mr. Prindle, "is the reasonable price the public pays for the invention; or rather, it is a way by which the inventor is permitted to pay himself, if he can, for his invention, by supplying it to the public to the exclusion of others, for a limited time, after which the public has the unrestricted use of the invention, which actually cost it nothing. The wonderful material advances from the days of our grandfathers (greater than the sum of all the ages before) is due to the encouragement of the patent laws."

With regard to the material point of patent claims and their relative weight, he continues:

"The claim of a patent, because it conveys a negative monopoly, is one of the most peculiar of all pieces of English composition. The more it says the less it means. It is like a bill of sale for cattle on a Texas ranch. If it purported to give title to all the 'short horned Durham steers with one white foot and three black ones,' it would convey perhaps only two or three steers, while if it said simply, 'all the cattle' it would convey all the steers of every kind, and all cows, bulls, horses and pigs. It might also be likened to a monopoly of everything that would fit into a box. If it said a 'round box having a pin stuck up in the middle,' only round things with a hole in the center would be included in the monopoly (only wheels and doughnuts), while if it said simply 'a box' not only would everything be included that would go into the round box with the pin in the center, but also everything that would go into a round box without the pin, a square box, an oval box, a star-shaped box and every other kind of a box. Therefore, the less a claim says the more of a monopoly it conveys.

"There are thus upper and lower, or maximum and minimum, limits to be avoided in a claim. It must not be so broad as to include earlier forms that were not invented by the patentee, and it should not be so narrow as not to include all possible embodiments of the soul of the invention.

"Having gotten his patent, what can the patentee do with it?

"The court will grant him an injunction against any one who makes, uses or sells any embodiment of the invention. The court will also award him damages for any sales he can prove he lost through the interference of the infringer. It will also award him any profits he can prove the infringer made through the use of his invention. The most valuable of these remedies is that of suppressing competition by injunction.

"When a suit is brought on a patent, the defendant may show, if he can, that the patent is invalid. He may set up any one of the following defenses: That the patentee is not the original and first inventor of the patented invention; that the invention was known and used by the public before it was invented by the patentee; that the invention was described in some publication more than two years before the application for patent was filed. He may also show his machine does not infringe the patent. . . . .

"Not only will the court, by its final decree, grant an injunction to the patentee in a proper case, but, under some circumstances, it will grant a temporary injunction at the outset of the suit. If the patent has been previously sustained by a court, even in a suit between different parties, or in case the public generally has acquiesced in the validity of the patent, the court, in the absence of a very strong showing of new evidence against the patent, will grant a preliminary injunction. As patents are granted in this country only after a careful examination of the prior art by the officials of the Patent Office, and are therefore presumably valid, a preliminary injunction in the absence of a strong showing of anticipating prior art should be granted whether or not there has been a previous adjudication and whether or not there has been a public acquiescence. The United States Court in New York City is tending in this direction, but in this respect it is an exception. The requirement of a previous adjudication or public acquiescence as a prerequisite to a preliminary injunction is an inheritance from the British patent law, where a good reason existed for these requirements, namely, that as there was no examination made as to the novelty of the invention before granting the patent, there was no presumption the patent was valid. During the early years of our patent system, no examination was made, but now that such is the fact, the patentee should not be treated as though his patent were presumptively invalid and made to wait until the termination of a perhaps protracted suit before getting any relief from the infringement of his patent.

"Those who seek to appropriate an invention without paying tribute seldom make Chinese copy of it. They usually make something which, at least, avoids the terms of a claim. So the courts adopted what is known as the "doctrine of equivalents," under which the inventor is entitled to include within his monopoly not only everything which is described by the language of his claim, but everything which is the mechanical, chemical or electrical "equivalent" of what is claimed. This term "equivalent" is necessarily indefinite and it gives the court an opportunity to do what it considers to be equity in the particular case.

"The monopoly granted by a patent is a very convenient one. It includes the three separate branches of the right to prevent others from making, or from using, or from selling the invention. These three rights can be granted either separately or together. . . . . .

"Our own system will be better understood by a brief comparison with some of the principal foreign systems. In America the Patent Office, as I have before stated, makes a careful examination before granting the patent to see that patents are granted only for novel inventions and that the claims are restricted to a monopoly to which the inventor is justly entitled. Thus our patents have a prima facia validity. France, on the other hand, makes no examination before granting a patent, and requires no claims. England has only just begun to make preliminary examinations. Germany subjects applications for patents to a very rigid examination. The United States requires no taxes of the patentee after his patent is granted, as the price of keeping his patent in force for the 17 years. England, on the contrary requires taxes paid annually after the fourth year, and Germany and France require annual taxes. The United States does not require the patentee to put his invention into commercial use, but France and Germany absolutely require it, and England will invalidate a patent for an invention which is manufactured chiefly abroad but only slightly or not at all in England. In the United States, any of the defenses to a patent can be raised in answer to a suit for infringement, and that at any time during the life of the patent. In Germany the only answer to a suit for infringement is a denial of the charge of infringement. If the validity of the patent is to be attacked, it must be by a separate suit for annulment, and such a suit can only be brought during the first five years of the patent. Therefore, after a German patent is five years old, it is conclusively presumed to be valid. In the United States, if one claim of a patent having several claims is proven invalid, that does not affect the standing of the other claims. In England, however, if one claim is proven invalid, the entire patent falls."

"It is perfectly safe to say the American patent system is a permanent part of our jurisprudence, and that future legislation will not be in the direction of curtailing the rights of inventors, but rather of encouraging them by making the enforcement of their rights a matter of less expense and time."

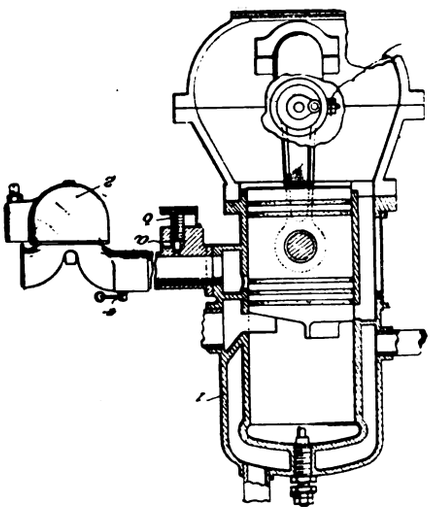
"The A B C of Electricity." Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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WINTON INVENTS A TWO-CYCLE

Cleveland Manufacturer Protects Regulating Device for Multiple Cylinder Engine—Features of the Design.

For some little time there have been no developments in the field of two-cycle design which would lead to the supposition that well-established manufacturers of the more familiar type of motor were contemplating a swing in this direction. Nevertheless, the possibilities of the two-cycle motor are so alluring that it would not be surprising were a constantly increasing amount of attention paid to its use in the



future, especially when the successes of the small number of makers who have adhered to it up to this time is considered. On this account considerable speculation may be aroused by the announcement that a patent was issued last week to Alexander Winton and Harold B. Anderson, Cleveland, Ohio "assignors to the Winton Motor Carriage Co.," and covering a form of "multiple-cylinder two-cycle explosion engine."

One of the difficulties encountered in the construction of multiple cylinder motors of this type hitherto, has been that of securing proper carburation for all the cylinders, with the use of but a single carburetter. Indeed, this difficulty has been so much more serious in its effects than has been the case with the multi-cylinder four-cycle motor, that it has been found necessary in some instances to employ two or more carburetters or mixing valves for the purpose. It has been suggested, however, that by arranging for the dilution of the charge independently in the case of each cylinder, the differences in suction from the various cylinders may be better equalized and a more uniform performance ensured.

This, in a word, comprehends what is apparently the chief purpose of the new Winton arrangement. The claims of the patent stipulate:

"The combination with a multiple-cylinder, two-cycle explosion engine, of a single carburetter having a supply communication for each cylinder, and means for admitting regulated volumes of air to one of said communications independently of both the carburetter and the other communication."

The accompanying illustration shows the general arrangement contemplated. The usual three-port cylinder construction is shown, also provides for the attachment of the carburetter, 2, to the cylinder, 1, at a point where a small chamber communicates with the regular crank case intake port. The throttle, 4, is placed outside the diluting or mixing valve, the latter revealing an air intake at a, and an adjusting screw at b, whereby it is possible to arrange for a permanent modification of the quality of the mixture, such as may be necessary to ensure a perfectly uniform performance in all the elements of the motor.

Adjustment of the Pet Cocks.

Considerable importance is attached to the proper adjustment of the several small pet cocks which are distributed in various parts of the car. If they are permitted to become sufficiently loose so that they will turn freely, there is danger that they will be opened by the vibration of the machine. The result will be the wasting of oil or water, from the cooling system or crank case, as the case may be, or a considerable loss of fuel, if the drain cock on the gasolene line happens to be affected. In the case of the shut off from the fuel tank or the pet cocks on the cylinders, any difficulty of the sort is immediately manifested in the running of the machine. In other quarters, the only evidence of trouble arises from indirect results, such as frequently may be of a harmful nature.

Care of the Floating Axle.

Rear axles of the full-floating type are frequently "built up" of a number of separate sections, including the axle tubes, the central or body section, housing the differential gears, and the torsion tube which encloses the propeller shaft. It is absolutely essential that these parts be retained in their proper alignment, and that they are not permitted to "work" through the relaxation of the bolts which secure them. Particularly when either of the parts has been dismounted for any reason, it is necessary to make sure that in reassembling the proper relation of the parts is not lost.

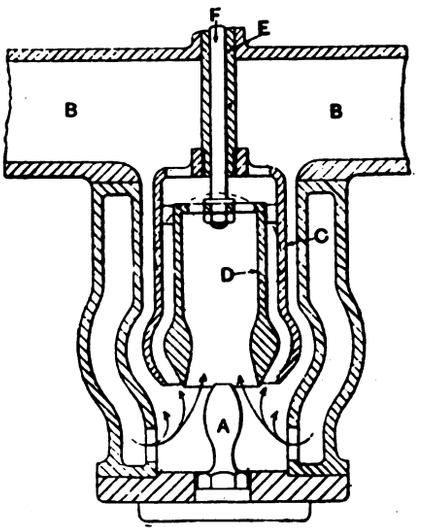
Safely Locating the Shut-Off.

Motor car designers should be especially careful in locating pet cocks or shut-offs to see that they are so placed that there is small danger of their being accidentally disarranged by the clothing of the repairer or driver, or from other causes. The results of such movements are not necessarily serious in their consequences. But they constitute a cource of annoyance.

INGENUITY IN A MIXING DEVICE

Concentric Tubes of Variable Area the Feature in New Foreign Carburetter—How the Flow is Regulated.

Whatever may be said of the success of modern carburetter design both from the standpoints of economy and smoothness of operation under all conditions of load and throttle opening, it is perfectly evident that no complaint can be made on the ground of lack of variety in method of attack. A really astonishing point, however, is that despite the wide variation in method, and the complexity of the requirements involved, a



marked uniformity of action has been attained. In this connection, it is interesting to note the latest development of the Daimler Moteren Gasellschaft, in which the use of the familiar venturi tube has been supplemented by a couple of concentric passages, so contrived that their respective sectional areas may be altered at will, to vary the relative velocity of flow.

The mechanical construction of the device is shown in the accompanying illustration in which the jet nozzle is shown at A, and the induction pipe at B. The spray chamber is broken up by the introduction of the two sleeves, C and D, both of which are adjustable in position. One is moved by means of the sleeve attachment, E, in the vertical sense, and the other is actuated by means of the rod, F. The lower ends of the sleeves are expanded into the peculiar bulbus form, shown.

The two sleeves are actuated independently of one another, either by automatic or manual means, and constitute the entire control of the quality and quantity of the mixture fed to the engine. By moving one of the sleeves in relation to the other, the opening between them is varied, while by moving both together, the area of the passage outside the tube may be varied at will. Altering the position of the rods E and F,

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thus controls the flow of air directly over the jet, and so the suction and lift of fuel into the mixing chamber above, and also the flow of air in the outer passage, thus regulating the amount of dilution which is to be given the rich gas in order to produce the correct firing mixture at the point of delivery to the engine.

A point which is to be observed in this connection also, is that while of unusual form, the parts involved are comparatively simple in construction. This is a characteristic fairly general with modern types of carburetter. In this respect most of them are in sharp contrast to many of the older types, in which the same results were obtained only at the expense of considerable complication, which happily has now come to be recognized as needless.

An Accessory for Night Travel.

While adding accessories to the regular equipment of the car is a form of "tinkeritis," which it usually is well to avoid, it sometimes occurs that some slight addition can be made which is of distinct merit. Such an addition is an electric light which will serve to illuminate the dial of the pressure gauge connected with the gasolene tank on cars which are not designed for gravity feed to the carburetter. The small lights rated at one-fourth or one-half candle power easily may be attached to the dash board in such a position as to throw their ray on the dial; a piece of tin or sheet brass should be shaped and attached to the light so that the operator cannot see the filament; the electrical connection may be made to the batteries through a push button, the latter within convenient reach of the driver. When traveling in dark roads or through unlighted streets it only is necessary to push the button and the position of the gauge hand may be seen and by this means the driver of the car can maintain an even pressure on the tank at all times.

Practical Hints for the Operator.

Where the connection between steering knuckle and reach arm is maintained by a pin held in position by a cotter, it is well to keep careful watch of the latter and to replace it with a new one when it shows signs of wearing.

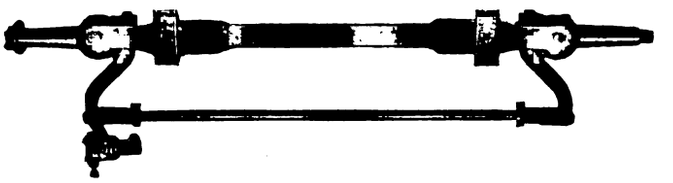
As the custom in refilling grease cups is to replenish the supply without removing the grease which remains in the cup, it is obvious that some of the lubricant may remain in one place for a very long time. Occasionally this grease should be removed and the cup thoroughly cleaned and freed from all verdigris and possible accumulations of dirt before being refilled.

In inserting a tire valve through the rim, the shoe should be held in such a position as to permit the stem to enter the hole easily. Unless this precaution is taken there is danger of straining the inner tube at the point of connection of the stem with the result of developing more or less serious leakage.

FRONT AXLES FOR MOTOR TRUCKS

New Timken Product for Use in Heavy Vehicle Construction—Details of Its Anti-Friction Mounting.

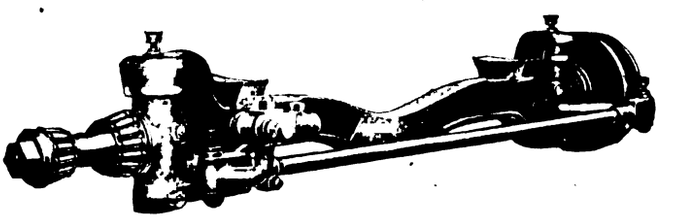
One of the most encouraging symptoms of the progress which is being made in the development of the commercial vehicle is the amount of attention which is devoted to the evolution of special forms of component parts by the makers who specialize in this line. Recognizing in the business automobile not simply a fruitful opportunity in the commercial sense, but also an opportunity for profitable effort in the production of elements which shall combine durability and strength with a minimum of running expense, several parts manufacturers already are bringing out new things in this line from time to time. Typical in this respect, is the new commercial vehicle axle which has just been introduced by the Timken Roller Bearing Axle Co., Canton, Ohio, a firm whose enterprise in this quarter, it should be mentioned incidentally, has been rewarded with an even greater amount of patronage than has been secured in the field of the pleasure vehicle.



TOP VIEW OF COMMERCIAL TRUCK AXLE



STRAIGHT VIEW OF COMMERCIAL TRUCK AXLE



THREE-QUARTER VIEW OF COMMERCIAL TRUCK AXLE

As in the lighter models of front axle produced under this mark, the objective of the designer has been to combine the greatest possible load-carrying capacity per unit of bearing with the required durability, as well as resistance to load and end thrusts—the latter being a class of stresses which are especially to be guarded against in vehicles which are to be heavily laden. Just how this has been accomplished, the accompanying illustrations are well calculated to reveal.

The axle proper is of the conventional I-beam type, slightly dropped in the center and carrying unusually heavy yokes for the reception of the Elliott type knuckles. The pads upon which the spring seats are mounted are forged integral. The seats themselves, however, can be located as desired. This permits considerable latitude of design without involving any modification of the axle and greatly increases its adaptibility. The great range of center to center widths thus provided for is best shown in the top view of the axle.

The axle is entirely roller bearing mounted. That is to say, the anti-friction provision is carried out even in the steering connections, which is most important considering the amount of dead weight which must be carried and the slow rates of speed at which it is to be driven. The standard conical type of bearing is employed throughout, and is used not simply in the axle stubs, but in the steering knuckle heads, where the actual support of the load is concentrated, and the universal joint steering connections. Hardened and ground steel bushings are employed and grease cups are fitted at all points where regular lubrication must be assured.

It will be observed that the axle is arranged for the usual cross steering layout common in vehicles of this type, no separate steering arm being required for the attachment of the connecting rod. Instead it is coupled directly to one of the arms to which the cross bar or link is attached, thereby simplifying the construction.

The outside dimensions for the standard section are 2⅓ inches width and b inches depth. It is figured for a load, including the axle weight of the vehicle, of 18,000 pounds.

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PENAL CODE REACHES JOY RIDERS

Unwarranted Use of Employer's Car Lands Chauffeur in Prison—First Case of the Sort in New York.

While no law exists in New York State enacted solely for the purpose of protecting automobile owners from "joy riding" employes. it has been discovered that a section of the penal code may be used as a basis of action against chauffeurs for using their employer's automobiles without permission. The first man to receive sentence under this act, for the unsanctioned use of a motor car, was Charles A. Terrell, of New York City, who, on Wednesday last, was sentenced by Justice Wyatt in the court of Special Sessions, to serve thirty days in the city prison.

Terrell had been arraigned under section 675 of the penal code, which forbids the wilful or malicious destruction of property. It was charged by his employer that on the night of August 3d, the chauffeur had taken the automobile from the garage without permission and accompanied by a party of friends, had used the car for 30 hours. It further was alleged that by reason of this trip the car had suffered damage to the extent of $100 for wear and tear and the expenditure for gasolene.

After a trial, Terrell was found guilty, and Justice Wyatt said in pronouncing sentence:

"Hereafter any automobile owner that will come here and swear that his machine has been damaged to the extent of 10 cents by reason of a chauffeur's using it without permission we will, if the evidence warrants it, find a conviction under this section and impose sentence. Let this be a warning to all chauffeurs who go on larks at their employer's expense."

Cape Cod Favors Motorists.

Cape Cod folks are manifesting a spirit of fairness toward motorists that is being reciprocated by a very general observance of the law on their part. The town of Hyannisport has adopted a new and so far successful way with the reckless and fast automobile tourists. First, the special officers of the town tell them when and where they can run fast, but warn them that if they are caught running at a reckless speed around curves or through the villages they will be arrested and taken to court. While hundreds have been stopped and warned not an arrest has been made since the adoption of this plan.

The town of Sandwich has increased the speed limit in the villages five miles, making it now 15 through the thickly settled parts and 25 on the outlying roads. This is said to be one of the fairest towns in the State to the automobilists, and they appreciate it, as there has not been an arrest made, and not a single automobilist has had to be warned against exceeding the rate of speed permitted.

Fatal Touring in Death Valley.

Two Californians, resident of San Francisco, who attempted to cross Death Valley, Arizona, in an automobile, failed miserably in the attempt, which cost the life of one of them and would have proved fatal to the other but for the timely arrival of a rescue party. The two men, F. D. Spaulding, an automobile dealer, and T. P. McCauley, undertook a short cut across the desert at Gila Bend, on the 31st ult., against the warnings of friends who well knew the perils of such a trip in a heavy motor car at this time of the year.

They did not arrive at Gila Bend when they were due, nor did they return to Yuma, and a squad of rescurers equipped for the purpose, set out upon the trail of the machine. They found it stalled in the sand, and lying beside it, in the full glare of the sun, the victims of the unwise attempt.

The rescue party promptly set about trying to restore life to the two men, and finally succeeded in reviving McCauley. Spaulding, however, died five hours later, just as the party was entering Yuma.

Farmers Set Double Traps.

Farmers in Mercer County, N. J., have determined to put a stop to the speeding of automobiles on the roads passing through Trenton. Already several arrests have been made and in all the cases fines have been imposed by Justice of the Peace Narr. The farmers say it is impossible for them to have their windows open because the speeding automobilists raise dust which enters their homes. Two weeks ago the farmers hired men to mark off a mile of road. The agents of an automobile company warned automobilists of the speed trap. The farmers let the automobile men watch the speed trap, and hired other men to go into another part of the county, though on the through road from Philadelphia to New York, measure off another mile and lay for automobilists.

How It all Happened.

Should the Edwards county farmer, who may have found the seat of a pair of trousers hanging to his barb wire fence, send it to this office, says an Edwards county paper, we will see that he receives pay for the row of corn knocked down by a Mitchell car. The mud hole in the road was deep, and the only way to get around it was to cut the barb wire fence and smash about 200 yards of corn, which would have been paid for on the spot had not the farmer appeared with a shotgun while swearing a blue streak. There was really nothing left for the boys in the car to do but to cut the fence a second time and skip; and in the skip one of them lost a quarter section of his trousers. But then they will pay for the corn when the proof is furnished.

CHAUFFEURS TAKE UP POLITICS

Their Club Pledged to Active Work in National Campaign—The Purposes They Aim to Serve.

"Having decided that "automobile drivers are most loyal supporters of that which is right, just and fair, the Board of Governors of the Professional Chauffeurs Club of America, in meeting assembled, resolved that "the organization take an active and energetic part in the coming campaign for the election of a president of the United States." It also was decided that "there is hardly any other collection of individuals that can do more to bring about the election of a President."

As a basis to work upon, the board of governors adopted an automobilists' political platform, which is subject to modifications. This platform is as follows:

1. Fair laws and their administration to all.
2. Abolish prosecutions for technical violations of law.
3. Prosecute and punish reckless automobile drivers.
4. Abolish vicious speed traps and prosecute persecutors of the motorists.
5. Legislate against graft.
6. Protect the hotels, garages, automobilists and the people against the enactment of unwise and destructive legislation.
7. Place impartial judges on the bench and just executive officers in the positions of public trust.
8. Remove biassed judges and unscrupulous officers.
9. Work for good roads.
10. Compel a sane use of the highways.

Registration Lively in California.

From the office of the Secretary of State of California the report is made that during the month of June 519 motor vehicles were registered. In the same month 159 licenses were issued to chauffeurs, 82 transfers of licenses were recorded, and 14 duplicates issued to dealers. The amount of money collected by the State automobile department for the month was $1,517.

Automobiles in Mining Camps.

Automobiles are extensively being used for the transportation of men and ore in the mining country of northern Wisconsin, Minnesota and upper Michigan. The cars are operated between the various range cities andperform an especially useful service in carrying supplies.

New Jersey Has Second Largest Club.

With 1,121 members on its rolls, the New Jersey Automobile and Motor Club now is the second largest club in America. The Automobile Club of America, of New York City, stands first.

"The A B C of Electricity." Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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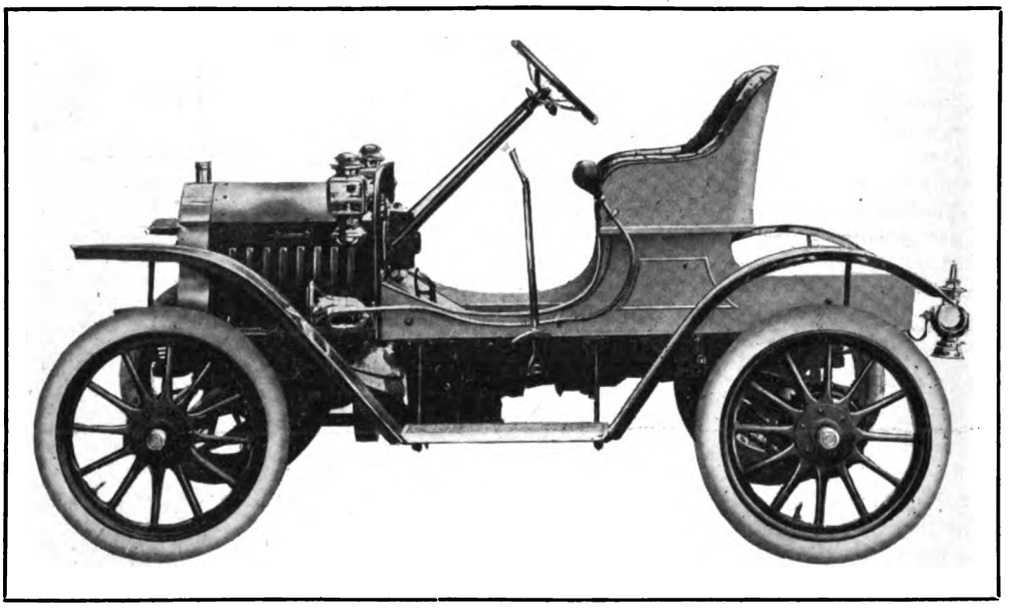
The Cars in the

BRUSH RUNABOUT EFFICIENCY RUN

had progressed up to Saturday morning as follows:

They have covered about 100 miles per day, giving numerous demonstrations in towns and cities passed through, and being received everywhere with the keenest interest and evidently great enthusiasm.

So far no mechanical troubles of any kind are reported. Casualties consist of one dog and one rooster. The running time is averaging from 17 to 22 miles per hour, gasolene consumption running 23 miles per gallon, and oil consumption running 110 miles per quart. As all motors were new and still at the start, the fuel and oil consumption would doubtless be cut down before the finish. Each car carries besides two passengers, baggage for two weeks, about sixty pounds of cuts and literature, oil, tools, tire chains, etc., making an extra load of about 175 lbs.



The Model B Runabout is a wonderful little car. It is not a copy of something else, nor a big car boiled down with the same number of parts only smaller, nor an appeal to vulgar fadism, but is built strongly and sanely to do its own work in the best possible way. For one or two passengers it does all the big cars do, barring speed above thirty miles an hour and at absolutely the minimum cost and the maximum convenience.

The Model B has refined and graceful lines, such as are seen on no other small car. Its running qualities are unapproached and unapproachable by any other, big or little. Its motor is as lively as a humming bird, but as persistent as a mule. Its transmission is perfectly quiet, self adjusting, and the most durable part of the car. Its clutches are positive and absolutely without jar.

You have heard numerous things said about the Brush Runabout both good and bad, from friends and supposed competitors. The only real valuable opinion is that of an owner. Ask any owner all about it. If you don't know one we will give you some names. Deliveries start this week. Orders are coming fast and we want yours as soon as possible.

This Run is to demonstrate the

MODEL B BRUSH RUNABOUT

On Pneumatic Tires, $550. **On Solid Tires, $500.** **500 pound Delivery Wagon, $600.**

WATCH IT

Brush Runabout Co., 1 Baltimore Ave., West **Detroit, Mich., U.S.A.**

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SWELL BACKERS OF "PIPE LINE"

American Millionaires with British Peers in Association to Cut Prices of American Accessories—Trade Menaced.

Makers of accessories who have a sale for their products in Great Britain, and bargain seeking automobilists who have a fondness for high society and a weakness for joining associations that promise cut prices, are bound to feel an interest in the "Automobile Co-operative Association of America," which describes itself with succinctness and alliterative turn as being " a combination of motorists to buy at greatly reduced cost everything from cars to cotter pins." While superficially it appears to be only for the benefit of Americans, it presents very unpleasant trade possibilities in connection with the sale of American automobile goods in England and on the Continent.

August Belmont is chairman of the advisory committee of the association, and other names almost equally famous are on the list, including James L. Breese, of Havre-de-Grace, Md.; Joseph H. Emery, of Lord & Taylor, New York; Gustave B. Fletcher, of Philadelphia, and more of the kind. By reason of the fact that the association is practically a branch of an English organization of the same character, which latter has been in operation for some time, an overwhelming list of British names and titles are also conspicuous on the prospectus, including an array of earls, lords, lieutenant-generals, right honorables, colonels, sirs, viscounts, bart.'s, K. C. B.'s, D. S. O.'s, M. Inst. C. E.'s, and the like that is perfectly thrilling.

Almost any plain ordinary American citizen who has $8 to spare can become associated in business with this international galaxy if he be so minded, because the organization has stock for sale—as many shares as anybody wants to purchase. The stock costs $5 a share and the annual dues are $3.

"On behalf of its members," the prospectus states, "the Association acts as purchasing agent for all kinds of cars and motor boats, and for component parts, accessories, tires, tools, apparel and supplies. Buying from the manufacturers its profits are applied in dividends to its members."

The danger to the American accessory maker in having his prices cut abroad is indicated by the next paragraph, which in continuance, says: "The Association is affiliated with the English Association of the same name and purpose, members of each having the privilege of the other. Offices are maintained in England and the principal Continental cities, where cars and supplies can be obtained at Association rates.

"This Association," the prospectus continues, "comprising as it will many thousand members, will constitute such a purchasing power as to command discounts beyond the reach of motorists through any other channel. In this manner chauffeurs' commissions will be entirely eliminated."

However indifferent the success of the Association may be in gaining an extensive membership in the United States, it will serve as an excellent "pipe line" for the English association in getting American goods at lower prices than the authorized agents on the other side now charge. The sale of American clocks, lamps, speedometers and similar accessories in London particularly, has grown to big proportions. If low trade prices are granted to the New York office, the goods will be slaughtered on the bargain counters at the immense cut-price establishment which the Association conducts at 1 Albemarle street, Piccadilly.

Warns Against Cut Rate League.

In an effort to protect its members from the wiles of those who seek to obtain patronage by representing themselves as being affiliated in a business way with the organization, the trustees of the New Jersey Automobile and Motor Club of Newark, N. J., have adopted measures which they believe will put an end to an evil which has devloped into a public nuisance. Throughout the State, and in fact the country, there has been a development of so-called leagues which claimed some sort of relationship with about every legitimate automobile organization in the United States.

In many cases the leagues are conducted by persons who purchase goods at the lowest possible figure, and by offering a small discount reap a harvest from the autoists, who are led to believe that the inducement is really worth their while and is offered through their membership with the automobile club, while as a matter of fact the circulars are mailed broadcast to every automobilist whose name is received through the State department of motor vehicles when the license is granted.

The New Jersey organization took official notice of the matter Monday night, when a resolution was passed declaring that it was the sense of the trustees that the members of the club will derive no benefit from any relations with certain private automobile leagues which are promoted for private profit.

Promoter Charged with Embezzlement.

Harland Norwood, promoter of the "Community of Automobile Interests," an organization to provide automobile accessories to consumers at favorable figures, was arrested on August 7 at Newark, on a warrant charging him with embezzlement. The charge was made by the Greene Motor Car Co., of Newark, and alleged that Norwood, while a salesman in their employ, had been forgetful about turning in receipts for sales. Norwood, who was released on bail, promises to explain everything satisfactorily.

BOOSTING THEIR BARGAIN COUNTER

The A. C. A. Drums up Trade by Circularizing Members—Alluring Offers of Cuts from Current Prices.

Having for a long time entertained itself with the gentle delusion that it has been "fathering" the automobile trade, the Automobile Club of America some months ago felt the itching to indulge in a little dabble in trade itself, and to that end opened an automobile supply store on the third floor of the club house. To stimulate sales a circular about the store has recently been sent to the members of the club by the "executive committee," proclaiming it as a "cut price" place and soliciting more business than the members have been giving it.

The club's supply store aims to give its customers "large discounts from current market prices on all supplies according to the circular sent out and it further asks all the members to make price runners of themselves by reporting the quotations made by other cut-price houses so that the club's store may readjust its list of prices to meet them.

A large stock of tires and all automobile accessories is to be kept on hand, and the club store holds itself in readiness not only to fill orders over the counter, but to take care of mail order customers as well. A copy of all the quotations given the chauffeurs will be mailed to their employers so that the latter may make "comparison with other quotations" or bills.

Lively competition faces the club's cut-price store in the number of other houses already seeking trade on this basis. Some of the latter have peculiar and unusual facilities for getting automobile supplies for almost nothing and sometimes employ curious methods, not to say questionable, methods of obtaining them.

Not all of the members of the club approve the idea of its going into the cut-price business. There are those who believe it is not quite the function of a club to set about merchandising and cutting prices in the field in which it affects to hold a social and sport relation. Furthermore the installation of a cut-price store in the club house building was made a purely "executive" action, without a consultation as to the will or consent of the members as a whole. That men like President Gary, of the steel "trust," whose chief activities for some time have been devoted to keeping up the price of steel, should divert their time to establishing a cut-price supply house in the club's building, is made the subject to more or less comment.

Whether the outside cut-price houses will be able to run the club institution off its feet, despite the backing and efforts of the "executive committee" on its behalf, remains to be seen.

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MUST IMPROVE GARAGE RECORDS

Requirements of Massachusetts Law to be Enforced on Dealers—Joy Riding Chauffeurs to Lose Licenses.

Under the powers conferred by the present automobile law the Massachusetts Highway Commission purposes to check joy riding by chauffeurs and to hold dealers to account for imperfectly kept garage records. Chauffeurs proven to have taken out cars without permission of the owners will in every case lose their licenses. As to the dealers, the number allotted to each to be displayed on the cars his employes may operate on the roads is the means adopted by the State authorities for exercising the same check over a group of cars controlled by one man as is possible over a single car individually owned. It makes the dealer responsible to the State properly enough, and unless the dealer is ready to live up to the requirements of the law as to keeping a record, and thereby making it possible for the authorities to pick out the chauffeur who is the real offender in cases of abuse of these privileges, the Commission's only recourse will be to come down on the dealer himself.

It is an evident fact that the garage record book has been regarded more or less as a joke among the automobile fraternity. Yet certain cases recently before the commission have shown the book to be such an important factor in preventing accidents and road abuses that from now on the garage manager who fails to live up to the law and keep accurate tab on the men and cars for which he stands responsible will be taking a serious chance. It is not to be understood that anybody at the offices of the Commission has attempted to take a threatening attitude in the matter. Rather, it would be fairer to say that the commissioners seem to feel that when the dealers once appreciate the bearing of the record book on the subject of complaints and abuses they will be glad to co-operate in keeping the records as nearly accurate as possible, without any easy going lapses. Otherwise the logic of events will soon bring it about that a careless record book at the garage will mean a suspension of the dealer's license as a matter of course.

The chief point in the whole matter is that unless the garage record is kept with regularity and care, the dealer's number comes to be a cloak for the kind of road experiences that foster complaints and antimoto sentiment among the public at large as well as before the commissioners.

Sheriff's Badges to Cure Speeditis.

Appointing automobilists to the office of deputy sheriff is the odd plan which has been adopted in Monmouth County, N. J., as a remedy for the propensity to crowd too many miles into the hour. Three men well known in Wall street are the first victims of this shrewd device and their fellow travelers on the Long Branch boats indulge in facetiousness at their expense.

Frank Savin and Monroe Rothschild, it appears have been among the most enthusiastic automobilists in the "Little Wall Stree" of Long Branch for several years. Both are good drivers and in days gone by have sent their machines at rapid clips down Ocean Boulevard. Incidentally considerable rivalry existed between the brokers as to who was the better machine driver. This rivalry caused Mr. Savin to make so many practice spins at such a rapid rate that they made him sheriff of the county. The residents, it is said, figured it out that the only way to make the broker drive slowly was to make him the sheriff. Mr. Savin, although proud of the honor, was distressed just a little because the title prevented him from honestly indulging in speeding. But the rivalry did not die.

Finally, unable to bear the strain any longer, Mr. Savin told Mr. Rothschild he would "go him" for a short trial anyway. The latter agreed and a date was set. The day before the event Mr. Rothschild was made a deputy sheriff at West End. Both were now officers of the law and any speeding was out of the question. Just who started this sheriff system of curing brokers with a predilection for speeding no one has been able to figure out. Robert Guggenheim, son of Daniel Guggenheim, is another who has been made a deputy sheriff.

Automobile "Prairie Schooner" En Route.

With a sort of prairie schooner body, equipped with a gas stove, ice box, cooking utensils, fishing tackle, guns and such other paraphernalia as conduce to human comfort, a White steamer belonging in Baltimore, Md., is following Greeley's advice and going west in the same rambling fashion as did the vehicles of the early settlers. The "schooner" is inhabited by George Snavely, of Baltimore, and his wife, who are vacationing overland. They left Baltimore three weeks ago and have reached Kansas City, whence they will motor to Abilene, Kan., then to Denver and Yellowstone Park. On the return the route will be through Minneapolis and Chicago, the plan being to reach Baltimore early in October.

White Issues Route Book No. 7.

White Route Book No. 7, just issued, contains detailed directions for touring between Chicago and Buffalo. With previous issues of this valuable series which the White Company has undertaken, complete and authentic information concerning the roads between New York and Chicago are now furnished for the first time. The new route book also contains road directions from Harrisburg to Cleveland, via Pittsburg, and from Pittsburg to Washington, Pa., where it connects with the routes described in Book No. 6.

EXTRA PERILOUS GRADE CROSSINGS

Danger Spots on Roads in Westchester County, Long Island and Staten Island —Warning List for Motorists.

Calling attention to grade crossings, which they designate as "extra hazardous," the Automobile Club of America of New York, has issued notices to its members giving the location of the most dangerous unprotected railroad crossings in Westchester county, New Jersey, Long Island and Staten Island. While the list is not intended to cover all the grade crossings in the vicinity of New York City, those not mentioned are so arranged that motorists have an unobstructed view of the track and by the use of ordinary caution can avoid accident.

Following is the list of the points where extra care is necessary:

Westchester County.

Just south of Briarcliff village, on the Putnam branch of the New York Central.

On Lake Mahopac road, ust south of Kitchawan, on the New York Central.

At Hawthorne, on the Harlem branch of the New York Central.

At Mill Plains, on the New York, New Haven & Hartford.

Two crossings between Mill Plains and Danbury, on the same railroad.

Long Island.

At Glenhead, on the Long Island Railroad. (A man was killed there a few weeks ago.)

At Westbury. (The automobilist, Fournier, and three men, one an official of the Long Island Railroad, were injured there a few weeks ago.)

At Rockville Centre.

Two crossings near Oakdale.

At Center Moriches. (A serious accident occurred there about six months ago.)

Between Jericho and Woodbury, on the Long Island Railroad.

At Sayville, near the railroad station, where the tracks cross the Cross Island Roadway.

New Jersey.

Two crossings at Bogota, on the New York, Susquehanna & Western and the West Shore railroads. (At this crossing Donald Holmes, a Paterson lawyer, was killed last Sunday. Shaw, the chauffeur, was fatally injured, dving on Tuesday. Two others badly hurt.)

At Leonia, on the Northern Railroad of New Jersey.

Near Closter, on the Northern Railroad of New Jersey.

Between Mattawan and Freehold, at Wickatunk, on the Central Railroad of New Jersey.

Between Freehold and Farmingdale, on the Pennsylvania Railroad.

Between Farmingdale and Lakewood, on the Central Railroad of New Jersey.

At Keyport, on the New York & Long Branch Railroad.

Staten Island.

Near Huguenot, on the Staten Island Railroad.

Near Giffords, on the Staten Island Railroad.

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JERSEY'S GOOD ROADS MOVEMENT

Definite Plans for Convention at Atlantic City—Governor Fort and Leading Experts on List of Speakers.

At a recent meeting of the Associated Automobile Clubs of New Jersey, definite plans were adopted for a good roads convention to be held in Atlantic City on Friday and Saturday, September 25th and 26th. Efforts to interest the State Grangers in the affair have been successful, and the Associated Clubs propose to get in touch with every automobile club in the State and induce the different organizations to send delegates so that every locality will be represented. Aside from the regular organizations, the farmers, motorcyclists, and all others who are interested in the good roads movement, will be invited, and the road problem thoroughly discussed.

Not only have all the motor organizations in the State, including prominent members of the dealers' association, approved the plan, but State officials as well have set their seal of acceptance upon it. Governor J. Franklin Fort will make the opening address at the convention. Other speakers will be government experts from the Department of Agriculture at Washington and road experts from this and other States.

Individual members of the State Grange have showed a marked interest in the convention and an effort will be made to get the official support of the farmers' organization. Little trouble is anticipated along this line, for the reason that the convention is called as much to consider the farmers' interest as those of the other users of the highways, and the head of the National Grange promised the support of his organization to the good roads movement at the National Good Roads convention held in Buffalo recently.

The Atlantic City gathering will follow closely the lines of the recent Buffalo convention, with the exception that it will be local, and not national, in character, and so will be better equipped to take up the problems peculiar to New Jersey and its hundreds of miles of stone roads, that are famous all over the country and are constantly attracting an immense automobile traffic from other parts of the country.

New Attack on Anti-Trap Pickets.

"Doing unnecessary work on the Lord's Day," was the singular charge against a young man named Howard Hatch, who was arrested for standing in the vicinity of a "trap" in Norwood, Mass., and handing to automobilists a card warning them to keep within the limit of speed. The case was heard by Judge Hutchinson and the young man was convicted, but the case was placed on file. Judge Hutchinson, before finding the young man guilty, suggested that the Automobile Association, instead of having a man stand near the traps, should station one at either end of the town on the main road, and there hand out the cards. Chief Sackett also made the suggestion that a large sign be placed at either end of the town warning automobilists in regard to the speed limit. The case was put on file, with the hope that the town and the Automobile Association will agree on some plan so that they can work together in the future.

Automobile Emergency Repair Wagons.

Automobiles are to become a part of the equipment of the Brooklyn Rapid Transit, replacing the horse drawn emergency repair trucks that are a familiar sight to regular travelers over the many lines of street cars in the big Long Island borough of New York City. Demands for the emergency service have been hard on the horses which frequently have scarcely time to return from one long journey before there is a call from another direction. The possibilities of an automobile service appeared so inviting that it was determined to equip an antomobile truck of high power with the body and tower of one of the horse-drawn repair wagons and the results were satisfactory. The next step was to obtain a specially constructed gasolene vehicle of high speed and it now is in service. It carries an extension tower which enables the crew to work in ease and with safety on the overhead wires. In the body of the wagon are the tools, repair kits and materials ready for instant use. Not only is it more rapidly and readily driven through the streets, but it is ready to answer with unflagging promptness any number of calls made upon it. The substitution of similar vehicles for the old style equipment now appears to be simply a question of time. Such a machine has been in use in England for some little time, and is reported as having given good service.

Atlantic City Forbids Warning Signs.

Warning signs placed by the Atlantic City Automobile Club along the roads in that vicinity are to be removed by order of the Board of Freeholders. The meeting, held on Wednesday, 5th inst., was marked by excitement. The signs to which objection is made read "Slow to legal limit; police trap." Mr. Irving, a freeholder who represents the district in which John Carver, the Judge who last month collected $400 in fines from those who ran through the village faster than 20 miles an hour, is located, demanded that the signs be torn down.

"As soon as they pass these warnings, he said, "they drive recklessly and dangerously, and the signs are an outrage upon justice. It looks to me as though the club is not in sympathy with having the speed law obeyed, but is trying to save the automobilists from being fined for their lawbreaking. I believe in Justice Carver's rigid enforcement of the speed regulation."

TEST FOR ANTI-SMOKE ORDINANCE

Cab Company Assails Constitutionality of Park Board's Law—Appeal from Judgment Against a Chauffeur.

In order to test the constitutionality of the new anti-smoke ordinance of the New York City park board, William Scully, a chauffeur employed by the New York Taxicab Co., was arraigned before Magistrate Moss in the Yorkville police court on the 5th inst., charged with permitting smoke to issue from the exhaust vent of his machine He was fined $2. Louis D. Mooney, counsel for the company, said he would pay the fine under protest, and would appeal the case at once to test the constitutionality of the ordinance. Six other chauffeurs of the company who had been arrested were discharged.

At the invitation of Magistrate Moss Assistant Corporation Counsel George Nickerson and Mr. Mooney were present to listen to the testimony against the chauffeurs, and it was decided to make a test case, Scully being selected as the defendant. It was ordered that copies of the minutes of the hearing be furnished Messrs. Nickerson and Mooney.

Philadelphia Persists in Its Shakedown.

Nearly 3,000 owners of automobiles in Philadelphia have all season long operated machines with State permits only, regardless of the fact that an additional city license is required, and in order to put a stop to this evasion of the law the Department of Public Safety will in the near future issue a circular letter calling for attention to the fact that a city license is just as necessary as a State license. The cost of a city license is $2 per year for the original license and $1 for each year in the future. Owners and operators of automobiles have all along contended that a State license is sufficient, but the local authorities will in the future enforce the ordinance.

Jersey Justice Pursues a Phantom Car.

Frederick C. Eberlin, manager of the Stock Exchange power plant, received the following official letter on Saturday last, 8th inst.:

Ancora, Camden,
"8—5—08.

"Dear Sir—While speeding your machine 3530 on July 11, 08, on the County Road between Berlin and Hammonton, my Officer found You exceeding the Speed Limit; machine running at the Rate of 63 seconds to ¼ Mile; therefore accountable to a fine of $25 and $5 cost. Not wishing to take Lawfull action, I await your reply. Yours truly, C. WALDROGEL, J. P., Ancora."

Not having owned or driven a machine for four years, Mr. Eberlin naturally believes that he can prove a perfect alibi if C. Waldrogel, J. P., undertakes to enforce the Jersey law on him.

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EXHAUST GAS AS A GERMICIDE

London Physician Says the Automobile Smell Combats Disease—Chicago Doctors Ridicule the Assertion.

Right on top of all the fuss about obnoxious exhaust from automobiles, which is causing numerous arrests in New York, comes the information of a certain London scientist claiming that exploded gases coming from the muffler kill germs and thus greatly lessen the possibility of disease contagion. American scientists and physicians, however, do not agree with their English colleague, asserting that no such thing occurs, in spite of the fact that the death-rate in London is less at present than it has been in 50 years. From which, it is obviously to be doubted if we will ever disinfect our houses or fumigate them after sickness, by attaching a hose to the muffler of our car and permitting the engine to pump smoke and lifeless gases into homes. Dr. J. F. Biehn and Health Commissioner W. A. Evans, declare that the anonymous London physician who says "the burnt carbonized matter is a splendid antiseptic and the creosote vapors that come from the motor are in reality a health tonic and bracer," had reason to seclude his name.

"All the creosote deposits from all the automobiles in Chicago," said Dr. Biehn, "wouldn't kill the germs on a square inch of city pavement. If the machine is a good one there is nothing left from the combustion of the gasolene except carbonic acid gas and water. In any event there could be no great amount of substances of an antiseptic nature. The Londoner was dreaming."

Dr. Evans' position was that the gases had absolutely no purifying effect upon the atmosphere.

"Germs are hardy things, as anybody knows," he explained. " A germ can stand anything that a man can, and I haven't heard that automobiles had caused any deaths recently in that manner. When one wants to fumigate a room the fumes of the sulphur or formalin must be so strong that a man can't stand them, or the germs 'live happily ever after.'

"I wouldn't say that the automobile gases are especially harmful. I should call them merely objectionable."

Inexpensiveness of Swiss Motoring.

Though Switzerland has commonly been regarded as a country where travelers are looked upon by inn keepers and the law makers as legitimate prey, the amount of $2.59 per day per person, the cost recorded in the case of a recent experience is by no means a sum to worry over. According to Dr. A. H. Heaton, of the Missouri Automobile Club, this amount represents his average expenditures for a trip which he now is taking through European countries. In his itemized accounts of one week in Switzerland, Dr. Heaton records hotel bills at $22.10; gasolene, $8.90; cleaning, garage, laundry and sundries, $5.30, making a total for two people of $36.30, or $18.15 for one.

For 13 consecutive days, June 14th to 26th, and including the cost of shipping the car across the Channel on its return to England, the total for two persons was $86.71, or $43.35½ per person, making a daily average of $3.25 per person—the very necessary item of tips, included. Dr. Heaton's original estimate of the daily cost per person was $4.68, the conservatism of which is emphasized by the statement that his average has not reached $4 per day at any time during the trip.

Teamsters Want Union with Chauffeurs.

Believing that the perpetuity of their organization may in time depend upon affiliation with the drivers of motor cars, the United Teamsters of America are seeking to have the Chauffeurs Protective Association of America join with them in the formation of a mutual alliance. This fact developed through discussions carried on at the national convention of the Teamsters which was held in Chicago on August 3d. The delegates to the convention represented 75,000 teamsters, located in all parts of the United States, and prominent in this gathering was Albert Oliver, who appeared as representative of the Chauffeurs Protective Association. Oliver is the first representative of an organized chauffeurs' union to be seated in a teamsters' convention.

Mount Wachusett Open to Automobiles.

By grace of the State reservation commission of Massachusetts, automobiles now may go to the summit of Mount Wachusett, provided the trip is made between the hours of 12 and 2 p. m. or 5 and 7 p. m. Automobile parties desiring to remain on the summit over night can obtain special permits to descend in the forenoon. Mount Wachusett is one of the most conspicuous protuberances on the geographical face of the Staee, not because of its height but because of its lone position. Because of this fact and the comparative ease with which it can be ascended it is a delightful spot for tourists to visit, affording views as varied and beautiful as they are far extending. It is a State reservation.

Pittsburg Frowns on "Joy Riding."

Automobile owners of Pittsburg, Pa., are going to try to take concerted action to prevent "joy riding," the first instance of mutual interest being shown in the Allegheny county court last Thursday when Harry Curtis, a chauffeur, was put on trial charged with trespass, it being alleged that he took the automobile of his employer and gathering a party went out and got drunk and ran the automobile into a ditch. Several automobile owners have agreed to divide the expense of this case.

FARMERS DEMAND BETTER ROADS

Rural Free Delivery and the Automobile Awaken Indiana Agriculturists—Pushing Highway Improvement.

That the development of the rural free delivery is going to play an important part in the good roads movement is shown by the activity of the government in response to the insistent demands of Indiana farmers for better roads in that State.

Before the advent of rural free delivery of mail the farmer was more or less indifferent about the condition of the roads, but in the last few years he has been buying automobiles and has grown accustomed to the luxury of having his mail delivered almost to his front door, and now he demands that better facilities be afforded him for the use of his motor car and to insure a consistent following of the mail schedule.

In response to this situation, the Post Office Department of the government is doing more in Indiana to extend good roads work than is being done through the combined efforts of all the good roads associations. This year's estimates of $8,000,000 for the building of roads in the State probably will be insufficient as the amount of work in hand will require much more than that sum to insure its completion. Recently the government, through its postal authorities, has been vigorously demanding that the roads shall be improved still more.

In the vicinity of Charlestown the entire rural mail service threatens to be discontinued, because of bad roads, and farmers are now projecting the building of 41 new roads. In other parts of the State officials and business men are hurrying through road improvements to save rural routes. Madison county is preparing to build 21 new roads at a cost of $250,000. The South Bend Business Men's Association is making special efforts in the direction of having good roads built.

Massachusetts to Issue Special Licenses.

Restricted licenses for non-resident operators are to be issued by the Massachusetts Highway Commission for the benefit of those who wish to run their cars into the State without being held up. Many such operators have been of the sort fully competent to take out a license, who have merely needed the right to operate until they could get their cars to some point where they could meet the commission's examiner and satisfy him of their fitness. The commission, under the law allowing it to place restrictions on licenses, has now decided to issue certain licenses in response to application by mail, the license to become void unless the operator passes a Massachusetts examiner before the end of the stated number of days, as set forth in the preliminary certificate.

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NORWAY HAS FEW AUTOMOBILES

American Consul Suggests that Present Limited Demand Might be Increased—One Native Factory Operating.

Norway probably would scarcely be regarded as a likely field for automobile exploitation. Nevertheless Vice-Consul-General Michael Alger, of Christiania, explains that a certain limited demand already has been built up, and indicates that it may be extended under proper conditions, which may follow later on. Of the 87 machines in present use in the country, the majority are to be found at Christiania—the only place where registrations may be recorded. These registrations come under the jurisdiction of the police department—29 of the present total having been received during the year 1907.

"Most of these are used for purposes of pleasure, but a few delivery cars are in use," he says. "All of these automobiles have been imported; about 25 are of American origin; the others are of French, English, and German manufacture. A few large machines of 35 to 40 horsepower have been imported, but most of the automobiles in Norway are of the smaller kind.

"There is only one automobile factory in Norway, and its output so far has been limited to two small cars. The competition offered by domestic manufacturers is therefore of no consequence. The Norwegian import duty on motor cars is 12 per cent. ad valorem.

"The kind of automobiles most likely to find a market here will be those ranging in price from $900 to $1,500, about 20 horsepower and well equipped to climb steep grades. Larger machines at higher prices will find but few buyers, inasmuch as there is only a small number of persons in Norway who can afford the luxury of expensive automobiles.

"The intended utilization of motor cars for conveying passengers as well as goods in several country districts, especially along the most frequented tourist routes, offers a field for sale of automobiles in Norway. Such traffic is now carried on by horse vehicles. In the district of Osterdalen, the principal valley of the country, several such automobile routes are now under contemplation. Likewise in the Trondhjem district, between the town of Stenkjar and Rodhammer, and in the Telemarken district, between Notodden and Sauland, automobile routes are to be opened.

"Automobiles intended for the Norwegian market should be equipped with double tires—that is, with inner air tube and outer casing, which latter should always be provided with an outside metal cover for protection against the sharp crushed stone used in the paving of many of the roads; otherwise punctures will occur too frequently.

"All chauffeurs must demonstrate their ability before they can obtain a license from the authorities to drive a car. Of such qualified drivers there are 121, 47 of whom were registered in 1907.

"The strict rules and regulations laid down by the authorities for driving automobiles on the Norwegian highways continue to be a serious drawback to the development of the use of motor cars in this country. Every district has its special rules in regard to such matters; thus a new permit has to be obtained for each one to be traversed. In some districts automobile driving has been entirely prohibited; in other places only certain roads within the same district may be used, and then on certain days and at specified hours only. The explanation given is that the roads are too narrow for the safe passage of horse vehicles and motor cars at the same time. It should be remembered that some of the Norwegian public roads have a width of about 7½ feet only, and that they have many sharp curves.

"New and more liberal rules, uniform for the whole country, as far as practicable, in regard to this matter, are now under preparation by a committee specially appointed for the purpose; but it will still take a year or more before any new enactment will come into force, and until then the automobile trade must reckon with the rules of the present.

"American automobiles have been well received here, and their many good points have been duly appreciated, but it seems that they range too high in price compared with English makes. Thus a British firm offers a 30 horsepower, 6-cylinder machine for $2,626, while an American 20 to 25 horsepower motor car costs $2,814. The terms of payment are always in favor of the European manufacturer, who generally gives long credit to solid purchasers, while the American invariably demands cash on delivery, or at least against shipping documents here."

Passenger Lines for Ohio Towns.

Warren, Ohio, and Cortland, in the same State, are to be connected by an automobile passenger line. The Cortland Transfer Co. has been incorporated and very shortly will operate a passenger, freight, express and possibly mail service between the two places. There is but one train each day between these towns and not only do residents experience considerable difficulty in getting to and from work, but the mail service is very poor.

Orders Automobile Fire Engines.

Lansing, Mich., has ordered an automobile fire engine. The machine is to be of sixty horsepower and designed to carry six men and equipment. Specifications call for a pumping capacity of 600 gallons per minute at a pressure of 180 pounds per square inch. The price of the machine will be $6,000.

OPERATORS MUST FILE PHOTOS

Roundabout Process of Obtaining Automobile Licenses in Mexico—Extortion in the Form of Fees and Taxes.

Getting an automobile license in Mexico is a matter of circumlocution. At the outset the owner of a machine must make application to the Governor of the Federal District for examination as to his capability for operating it. The application, written on regular official paper, having a wide margin on the left hand side, must give the applicant's name and address together with a description and the number of the machine. The application is presented in person, between the hours of 9 and 11 a. m., to Senor Pedro Buch, at 2a Ribera Santa Maria, No. 1128, and if satisfied as to the capability of the applicant, Mr. Buch will endorse the paper favorably, assigning thereon the number allotted to the machine.

The paper then must be presented to Seccion la del Go. del Do. between the hours of 11.30 a. m. and 1 p. m., or 4.30 and 6 p. m., together with two photos of the applicant each measuring 5x4 centimeters. Two document stamps, one for 50 cents and another for 10 cents, must be presented at the same time for attaching to the "Certificate of Aptitud" and "Permit to use automobile" respectively.

These certificates are then granted, together with the numbered plate for which a charge of $3 is made. The plate must be taken to the office of Mr. Buch so that it may be attached to the automobile. As a rule two days are required from the time application is first made to the final placing of the number.

In the same building at which the certificates above mentioned are granted, a bimonthly tax, at the rate of $2 per seat, per month, must be paid. Thus the tax for an automobile seating five people would be $20 every two months. The licensed owner receives a voucher, also written on official paper, giving the date of the granting of his certificate of aptitude, the number of such certificate and the address at which the automobile is kept. In renewing the payment of his tax he must show the receipt issued for the last previous payment.

Meriden Wants a Police Patrol Wagon.

Meriden, Conn., joins the cities adding automobile equipment to the facilities of municipal departments. Chief Bowen, of the Police Department, has been instructed to inquire about prices of police patrol vehicles and prepare an estimate to be submitted by the police board to the city council with the estimates for next year's appropriation. The police headquarters already is provided with a station for an automobile, that having been included in the plans for the building now occupied.

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The Week's Patents.

888,737. Automobile Running Gear. Charles T. Pratt, Frankfort, N. Y. Filed Jan. 24, 1907. Serial No. 353,890.

1. The combination in an automobile running gear of a pair of forward steerable wheels secured by pivotal joints to the ends of an axle and carrying the forward end, a truck consisting of an intermediate pair of steerable wheels secured by pivotal joints on the ends of an intermediate axle and a pair of non-steerable wheels secured to the ends of the rear axle and half elliptical springs extending longitudinally of the running gear on each side and secured to the intermediate and rear axle at their respective ends and means for supporting the rear of the body from said truck engaging on the middle portion of said springs respectively, substantially as set forth.

888,794. Starting Means for Gas Engines. David Ferguson, Buffalo, N. Y., assignor to George N. Pierce Company, Buffalo, N. Y. Filed May 8, 1906. Serial No. 315,787.

1. The combination with an engine having a relief valve, of a rotatable operating device for said relief valve which is driven by the engine and is normally in an inoperative relation to said relief valve, means for starting the engine, and a device which is connected to said starting means and is moved thereby transversely with respect to said operating device for moving the same axially into operative relation to said relief valve, substantially as set forth.

888,823. Vehicle Tire. Harry A. Knox, Springfield, Mass. Filed Dec. 13, 1905. Serial No. 291,623.

1. In a vehicle wheel, the combination with the rim thereof, a channel iron secured thereto, a series of springs extending transversely of said channel iron, said springs being so placed as to form a space between one spring and the next, and a series of holes through the flanges of said channel iron and located between said springs, and means for securing said springs to the channel iron.

890,083. Ratchet Coupling. Thomas W. Morgan, Waterloo, Iowa, assignor to Wilbur W. Marsh, Waterloo, Iowa. Filed May 11, 1907. Serial No. 373,183.

In combination, a shaft having a toothed outer race and having an outwardly projecting spindle, a band wheel rotatably seated on said spindle and provided with a bearing hole on its inner side, the outer side of said band wheel having a hub provided on its outer face with teeth, a compression spring in said bearing hole, a slidable pin in said bearing hole upon said spring, said pin adapted to engage a tooth on the outer face of said shaft when said band wheel is rotated in one direction, and be disengaged therefrom when rotated in the reverse direction, a crank having a hub rotatably seated on said spindle and such hub having a bearing hole in its inner face, a compression spring seated in said bearing hole and a slidable pin seated in said hole upon said spring, said pin adapted to engage a tooth on said band wheel hub when the crank is rotated in one direction and to disengage therefrom when the crank's rotation is arrested.

890,099. Carburetter. Henry Richardson, Waltham, Mass. Filed March 16, 1907. Serial No. 362,719.

1. In a carburetter the combination of an automatically closing valve and an elastically mounted adjustable stop therefor, limiting the opening of the valve, said stop being at a distance from the closed position and engaging the valve only when the valve is open.

890,107. Power Transmission Mechanism. Bennett Van Decar, Syracuse, N. Y. Filed June 25, 1906. Serial No. 323,290.

1. In a power transmitting mechanism, an epicyclic train having two separately revoluble planetary wheels traveling in different concentric deferents, one deriving rotary motion from the other.

890,247. Igniting Mechanism for Internal Combustion Engines. Clarence A. Myers, Frederick W. Haas, Jr., and Alvah A.



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Myers, Chicago, Ill. Filed March 7, 1908. Serial No. 419,794.

1. In a sparking apparatus for internal combustion engines, the combination with a plug having a threaded body, of electrode shafts journaled in said body to have oscillatory and rotary movements, rotary and oscillatory electrodes carried by said shafts, a driving connection for rotating one of said shafts, a spring carried by the outer end of the oscillatory shaft for holding the electrode advanced with a yielding pressure, a cap inclosing the outer end of the plug, and a packing gland through which the rotary shaft projects from the cap, substantially as described.

890,362. Tire Protecting Device. Leonard H. Kinnard, Harrisburg, Pa., assignor of one-half to Rollin S. Chamberlin, Harrisburg, Pa. Filed Nov. 14, 1904. Serial No. 232,554. Renewed July 6, 1907. Serial No. 382,473.

1. A tire protecting device comprising a stiff annular shield whose internal diameter at each edge is less than the external diameter of the tire inflated, and which normally makes contact along its edges with both sides of the tire and between its edges with the outermost portion of the tire, and whose internal surface recedes from the tire on each side of the innermost portion of the shield, the stiff material of the shield increasing in thicknes from the edges to the outermost portion of the shield.

890,473. Vehicle Steering Device. Edward J. Vraalstad, Buffalo, N. Y. Filed April 19, 1907. Serial No. 369,081.

1. In a steering gear for vehicles, the combination with a steering rod, and a duplex male screw thread thereon, of two interiorly threaded nuts, one for each thread, one nut being telescoped by an extension of the other nut, and a swinging member by said nuts.

890,482. Circuit Closer and Breaker. Alexander Winton, Cleveland, Ohio. Filed Sept. 15, 1904, Serial No. 224,584. Renewed March 12, 1908. Serial No. 420,695.

1. An explosive engine ignition system including an annular non-conducting contact running surface, an electrical contact depressed therein and flush therewith, the non-conducting running surface cut away at the side of the contact for the purpose described, and a roller contact spring held against and rolling on said running surface, whereby the roller contact travels smoothly across said cut away portion.

890,494. Carburetter. Orra E. Byron, San Francisco, Cal. Filed Aug. 13, 1907. Serial No. 388,301.

1. In a carburetter, the combination of a member provided with ports through which air can pass, and a valve member provided with portions for successively uncovering said ports so as to permit the passage therethrough of varying quantities of air, and a vacuum controlled diaphragm connected with said valve member for actuating the same.

890,532. Explosive Engine. Alfred P. Schmucker, Denver, Colo. Filed Jan. 14, 1905. Serial No. 241,119.

1. In an explosive engine, the combination of a common crank chamber, a charge inlet therefor, a number of cylinders connected therewith, each cylinder having an auxiliary chamber provided with two ports communicating with the cylinder, one port being at the inner extremity of the cylinder and the other in position to be uncovered when the piston is at its inward limit of movement, for the escape of the explosive mixture into the outer extremity of the cylinder, the said mixture having been compressed in the auxiliary chamber during the inward movement of the piston.

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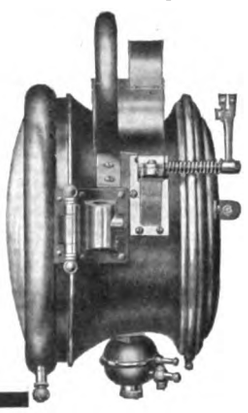
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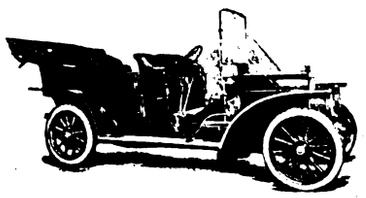
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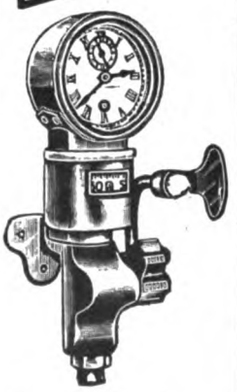
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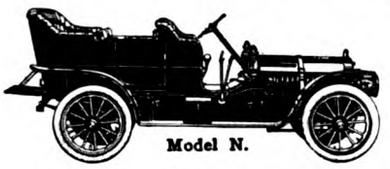
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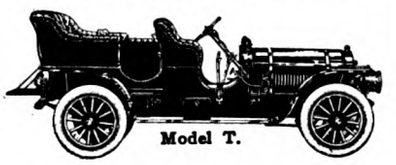
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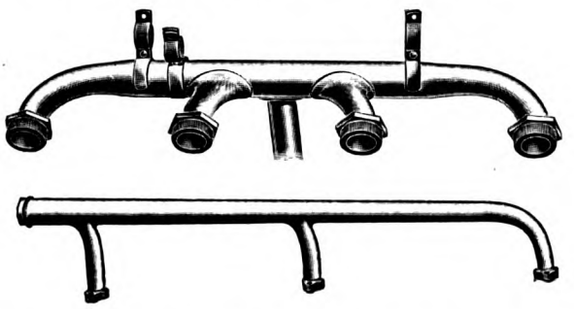
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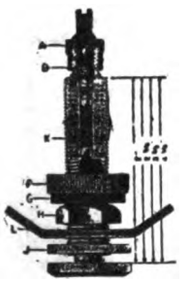


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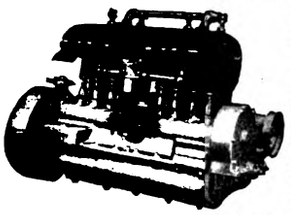
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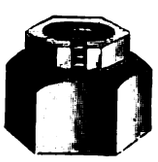
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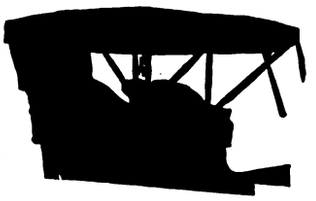
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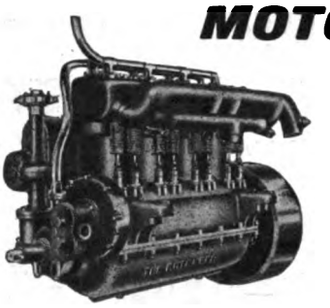
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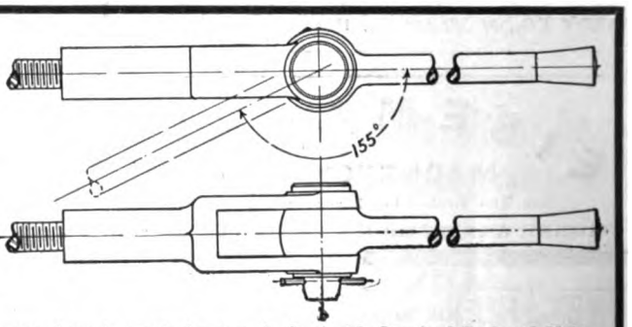


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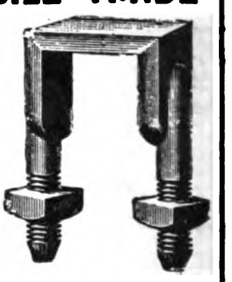
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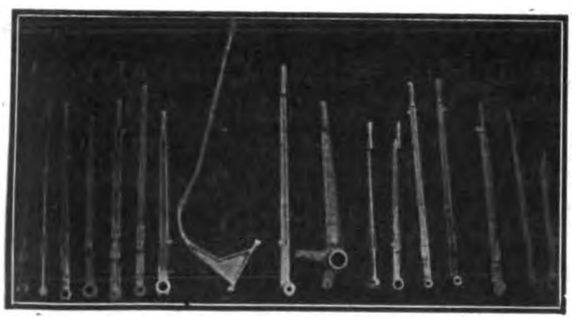
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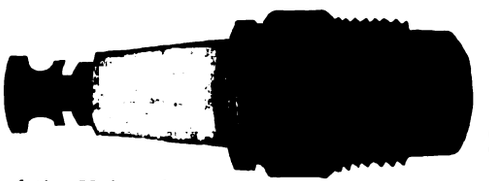


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A Six-Cylinder Thomas Flyer

Six-Passenger Car
Forty Horse-power

for $3,000

Five to Fifty Miles
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The greatest improvement in years—a distinct and marked advance which will create a new era in automobiles, which engineers have long known must come.

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Extremely artistic and refined. One to be proud of for its beauty, style and luxury, and to love for its extraordinary silence, smoothness and sweet running and easy riding on rough roads, in which it greatly excels, and which, taken as a whole, comes nearer fulfilling all requirements for family use than any car hitherto made, except those requiring extreme speed, power and size.

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In no sense is the 6-40 Thomas Flyer a cheap car: it is the other extreme.

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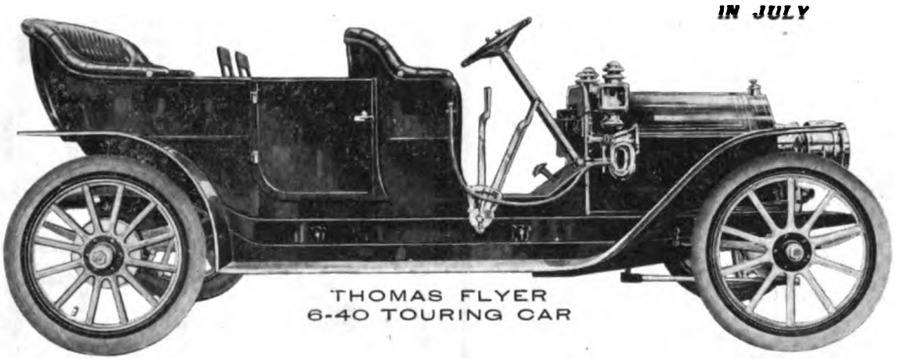
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3-disc clutch, encased in oil; patented.

Double Elliptic springs.

122-inch wheel base.

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THOMAS FLYER
6-40 TOURING CAR

Gas and oil lamps.

Prestolite tank.

Hand-hammered aluminum body; seats six looking forward, most beautiful and luxuriously upholstered and finished.

Body practically suspended between axles—the modern style.

Transmission on floating type rear axle.

Drop frame. Herringbone gears for quietness.

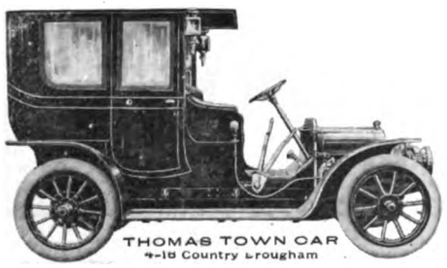
18-inch steering wheel; ball-bearing knuckle, exceedingly easy to steer.

Fan on fly-wheel. Four brakes. Three-point motor suspension; aluminum hoods and fenders; geared lubricator.

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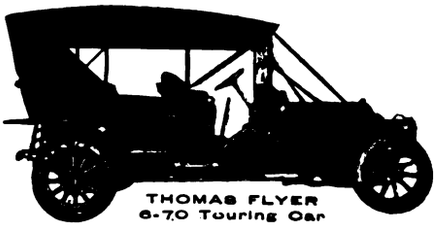
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THOMAS TOWN CAR
4-18 Country Brougham



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A CAR FOR EVERY DAY IN THE YEAR.

Winter or summer; night or day; rain or shine. Warm in cold weather. Cool in hot weather. Dry in wet weather. Closed if dressed for shopping, theater or social functions, open to the sunshine and breeze when touring.

It has a speed on high gear from five to forty miles an hour and will negotiate any passable hill or road. It will carry its people quietly, smoothly and luxuriously. It's the safest car in the crowded city streets or on a suburban road.

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This car will be used two-thirds of the year for business, shopping, theater and social functions, for which the open car is not adapted, saving more than half the expense of operation and cost of maintenance and tire renewal of a large car.

Should you live in the country it will carry you more exclusively, quickly and comfortably than a railway or street car. It fulfills any business or social requirements. It is a car that is well worth your investigation.

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The Old Reliable Thomas Flyer—Ready For a Trip Around the World at any Minute.

Mechanically a duplicate of the stock car selected only six days before starting, without special preparation or test for the great New York-Paris Race. Won the international endurance race to San Francisco, and at this writing is still ahead. The only car that went the route; and the winner of more contests than any model in the world. Plenty of reserve power, reserve strength, reserve speed, roomy, luxurious, quiet, well balanced, splendidly proportioned.

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The very climax of automobile construction. Equipped with top, speedometer, clock, prestolite tank, tire irons, two separate ignition systems, geared fans, oilers and pumps. Everything that money can buy.

Splendid body balance and exceedingly easy riding.

The greatest reserve of power, speed and strength with the constant torque of six cylinders, insures the smoothest running on high gear amidst the crowded streets or on muddy roads and steep hills.

The 1909 model will be faster, smoother and quieter than ever. The 6-70 Model K is the fastest stock car in the world. It eats up the hills on high speed easier than the average car takes smooth roads and excites an exultation, pleasure, contentment and pride not possible with any other car.

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E. R. THOMAS MOTOR CO., BUFFALO, U. S. A.

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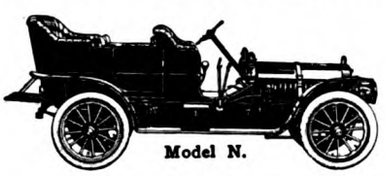
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Model N.

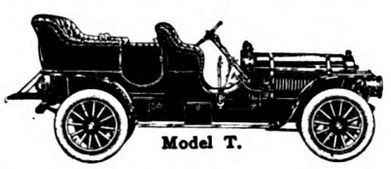
Model K—4 cyl., 4⅞ x 5
$3,500

Model N—4 cyl., 5 x 5
$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½x4¾
$4,200

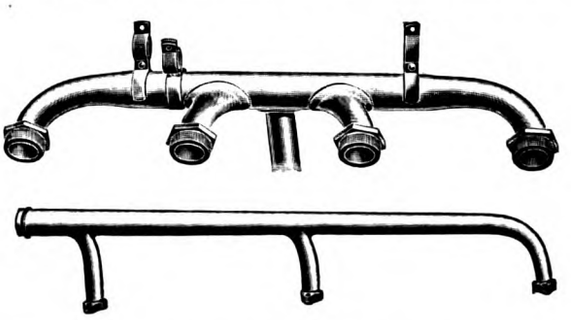
Model T—6 cyl., 5 x 5
$5,000


Model T.

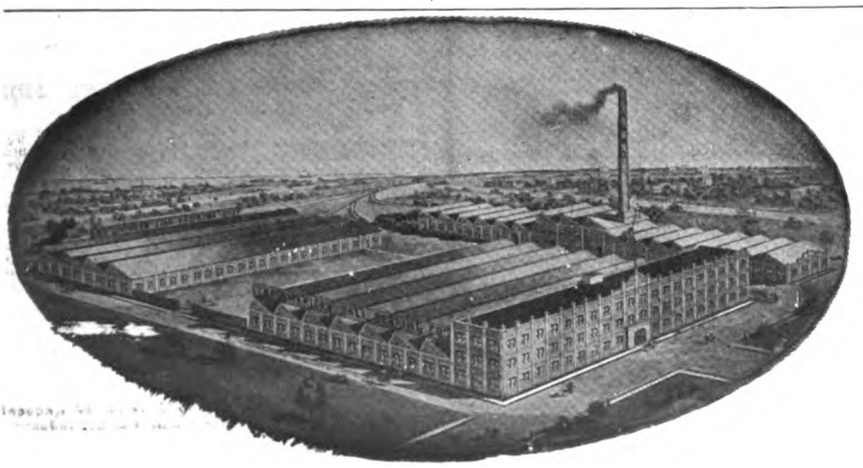
Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.
1007 E. 22d Street INDIANAPOLIS, IND.

INTAKE AND EXHAUST PIPES WATER INLET AND OUTLET PIPES



THE WHITLOCK COIL PIPE CO.
HARTFORD, CONN.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.
L. S. & M. S. Ry. & Edgwater Park
CLEVELAND, OHIO, U.S.A.

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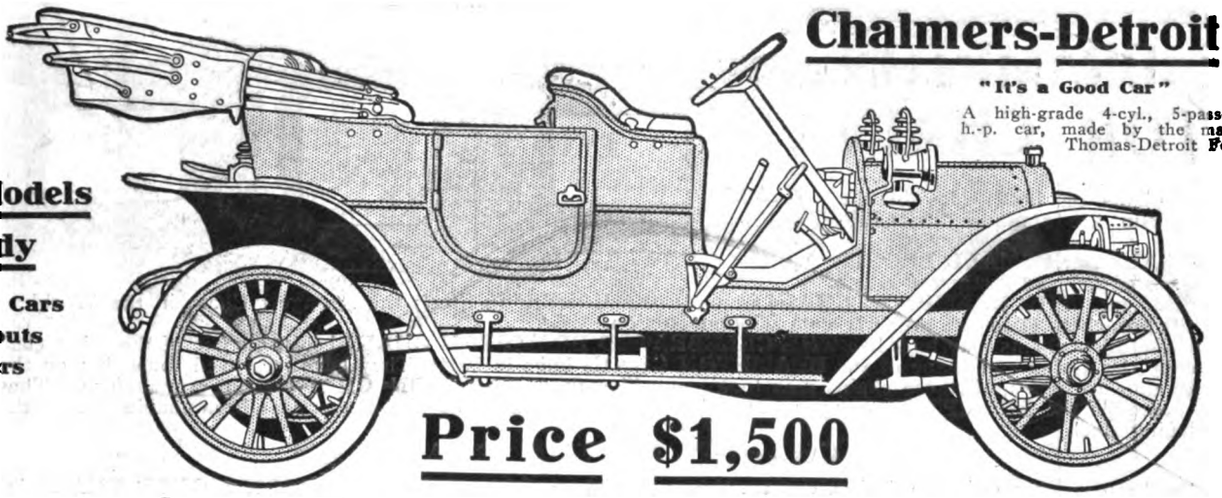
Chalmers-Detroit "30"

"It's a Good Car"

A high-grade 4-cyl., 5-passenger, 24-30 h.-p. car, made by the makers of the Thomas-Detroit Forty.

1909 Models Ready

Touring Cars
Tourabouts
Roadsters



Price $1,500

Our Profit Nine Per Cent

No doubt other cars will be offered around this price. It remains for you to compare them.

Here is one so good that our profit—based on our full capacity of 2,500 cars—will be but nine per cent. Judge if anyone else gives so much for the money.

Here is one that has two years the start of all others. We have spent two years in perfecting it. It is not a makeshift—not an experiment.

This one has behind it all the reputation—all the skill and experience—we gained in making that incomparable car—the Thomas-Detroit Forty.

This one is designed by H. E. Coffin—for years the chief designer of the Thomas Companies—one of the leading automobile designers in America.

The car combines the best foreign features with the best American. For Mr. Coffin made two trips to Europe in working it out. Yet it copies nothing, either foreign or American. It simply adapts the best principles of the world's best engineers.

This car is not assembled from stock parts picked up haphazard. Every design of every part is made by our own engineers—the best engineers in the business. All the leading features are patented.

This car is luxurious—speedy and powerful—a car that you can take pride in. Low in price—economical in upkeep—yet with all the perfections of the costliest cars.

Compare it with rival cars—with any car costing up to $2,000. We are willing to abide by your judgment.

The first of these cars cost us $33.000. Then last winter, when things looked bluest, we contracted for $3,000,000 worth of materials—to save you 20 per cent.

That is how we made this car possible—by taking enormous risks. Yet we ask for our profit a paltry nine per cent.

Our 1909 cars are now being delivered.

Note These Facts, Too

The factory cost on this 4-cyl engine is $261. Yet 4-cyl. automobile engines are sold as low as $75.

The transmission costs us $94. The axles—made of Nickel Steel—cost us $125.

The annular ball bearings used in this car cost $103. We use as many as the Mercedes uses—the Hotchkiss or Renault.

Look at these costs again. Then think that they refer to features of a $1,500 car. We could save half or more on any of them were we trying to stint on this car.

We equip this car with Diamond QUICK DETACHABLE tires. The usual clincher tires would cost 15 per cent. less.

We authorized our factory to spend on the body finish 15 per cent. more than their estimate. Our crank shaft is larger than on any American car under 60 h. p. Our brakes are enormously strong.

Twice the price can buy no better features. It can only buy more power.

The same economy applies to extras and to replacements. We furnish one of the best tops for $100. A Simms-Bosch Magneto for $125. Two gas lamps and a gas tank for $50.

Our repair parts are all sold on a reasonable margin—not at the usual profit of 200 or 300 per cent.

The four cylinders are cast together, as in the latest Fiat, Mors, Argyll and Hotchkiss. This gives lightness, compactness, perfect alignment, and a dozen other advantages. The only argument ever advanced against it is "cost of replacement." We answer this by furnishing a set of four cylinders for $35, less than most makers charge for two or even for one cylinder.

We use the Unit Power Plant, as in the latest Decauville, the new Hispano-Suiza, and the Motobloc. Motor, clutch and transmission form a single unit, so they cannot get out of line.

The wheel base is long—110 inches—insuring easy riding. The body is suspended between the axles, after the style of the Mercedes.

Valves like the new Napier. The ¾ elliptic springs like the Renault. Multiple disc clutch like the Isotta and Fiat.

The gas intake is water jacketed to avoid the troubles caused by cold gasoline. Constant level splash lubrication—perfect dust protection.

Floating type rear axle, used heretofore only on the costliest cars. Selective sliding gear transmission—three speeds and reverse. Anti-backing device to protect you on hills. Provision for double ignition system.

So simple in control that a novice can master the car in ten minutes. A single pedal operates both clutch and brake.

It is easy to claim the best car at the price. But compare the facts—put all claims to proof. We have no competition to fear.

It is also easy to criticize features that others can't afford—devices that others can't copy. But let us answer those criticisms and you will realize how weak and how futile they are.

At this writing it looks as if the demand for this car would be twice our supply. Orders are filled in turn, or you can reserve a car for future delivery.

Please act at once—send for our catalog now. For, when our output is taken, you can find no car within $500 of our price to compare with the Chalmers-Detroit "30." Don't wait and regret.

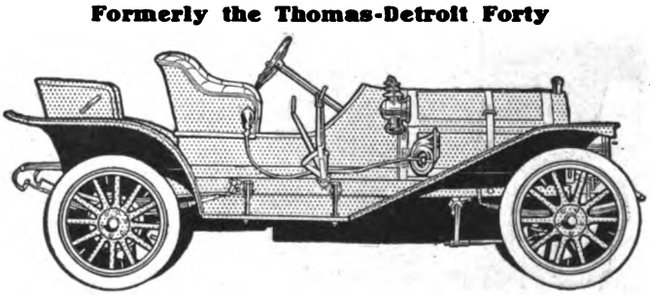
This change in name involves no change in ownership, personnel or management. It is simply made to avoid the confusion of two Thomas concerns operating on separate lines.

Chalmers-Detroit Motor Co., Detroit Mich.

HUGH CHALMERS, President
Successors to E. R. Thomas-Detroit Co.

Chalmers-Detroit Forty

Formerly the Thomas-Detroit Forty



Chalmers-Detroit Forty Roadster, $2,750

The best guarantee that our $1,500 car has is the fact that it is made by the makers of the Chalmers-Detroit Forty.

This car is incomparable. We have never been able to make enough of them to supply the demand. Our output every year is sold before June, and this year (1908) we could have sold 200 more.

The 1909 models of the Forty—now ready—are the same as the 1908 models, save for the brakes and the springs. The brakes are heavier, the springs more easy riding. We know no way to improve it. The records it made during the past two seasons prove it the best medium-priced car that is made. Its users seek for nothing better.

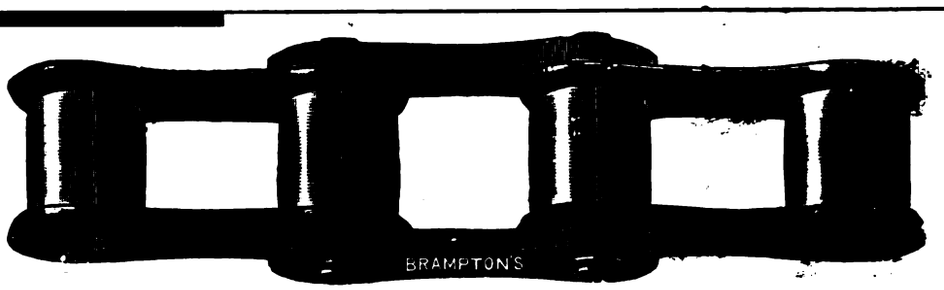
We advertise our Forty in but a limited way. Our present users, through their endorsements, more than sell our output. The only way to get one is to order early.

The 1909 models of the Chalmers-Detroit Forty are shown in our catalog. Made in two styles—Touring Car and Runabout. Price $2,750.

CUT THIS OUT
as a reminder to send for our catalog. Address Chalmers-Detroit Motor Co., Detroit, Mich.

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THE BRAMPTON MOTOR CHAIN



All side plates on both sides of the Brampton Chain are stamped **"BRAMPTON."**

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement. THE BRAMPTON CHAIN is made of self-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material —self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—**"ENUF SED."**

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size. We have in stock chains to fit all American and foreign cars.

YOUR 1909 CAR

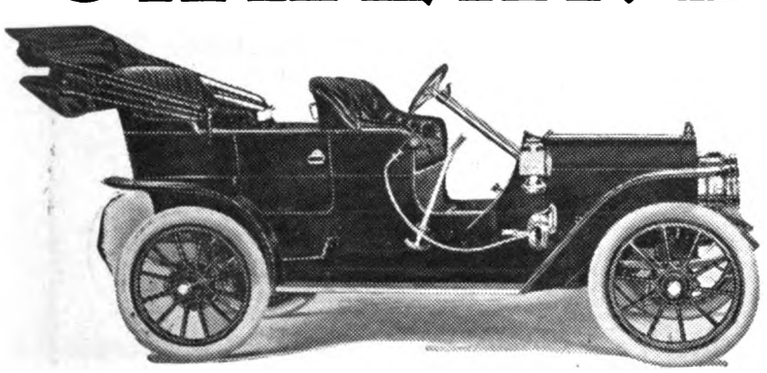
You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.
Agents wanted in unoccupied territory. Catalog on request.

CHAS. E. MILLER, Manufacturer, Jobber, Exporter and Importer
Main Office: 97-99-101 Reade Street, New York

BRANCHES: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo.
202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

OAKLAND



Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

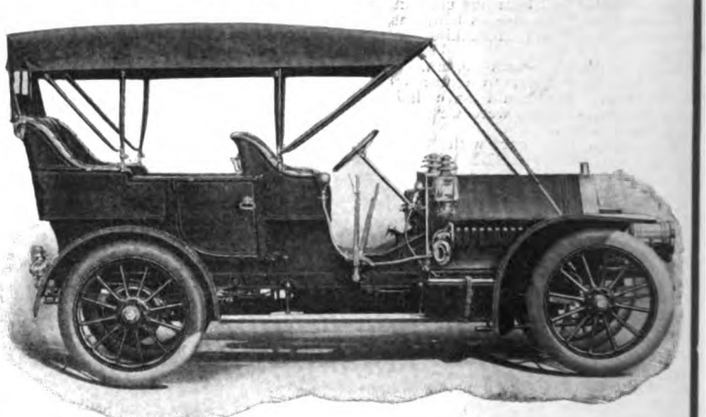
¶ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

THE "JEWEL 40"

THE "NON-SKIDDING" CAR



Compare following specifications with other cars at $3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY
234 Walnut Street, - Massillon, Ohio, U. S. A.

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$2000

THE SELDEN CAR

Finished the Glidden Tour with a CLEAN SCORE and Was Deprived of a "Perfect Score" by a Technicality

We entered a stock car, which had already been run over 5,000 miles, without any shock absorbers, straps, bumpers or other safety appliances, complying strictly with the rules as to equipment. (All other cars were equipped with these devices.)

Our car was equipped with a speed indicator, the sprocket connection of which worked loose crossing the mountains in Western Pennsylvania and fouled our steering knuckle, making it impossible to avoid a large boulder in the middle of the road, and we broke a front spring in consequence.

The broken spring did not penalize us, nor the repairing of the spring, but because we used four machine-made nuts (instead of four hand-made nuts) we were disqualified from further contest for the Glidden Trophy.

Our car continued the tour as a non-contestant, checking in and out every day, observing all the rules and finished with a clean score.

It was in such good condition upon arriving at Saratoga that we made a non-stop run from Saratoga to Rochester, a distance of 272 miles on the following day without any adjustment whatever.

Our "extra parts" bag was not opened on the entire trip. No other car did any better.

COMPARE OUR CAR WITH OTHERS IN THE TOUR AND SEE WHAT WE HAVE ACCOMPLISHED

Demonstrating the highest quality of workmanship and material, durability, stability and the all-important fact that a strictly first-class gentlemen's car can be made and sold for $2000.

Why Pay Double the Price for a Name-Plate?

Duplicates of this car are now ready for delivery.

All our cars are sold with a guarantee and with all that we have out during the past season the cost of repairs amounts to little or nothing.

The "Silent Selden" (as the car has become known by its quiet running) is made on honor, a credit to the name of the man who invented gasolene automobiles, and every owner is proud of his purchase.

Superb riding, roomy tonneau, luxurious upholstery, smooth running, great hill climber, flexible and easily handled, economical in up-keep, stylish and attractive—the coming car of the multitude.

Now closing 1909 agencies—over half our output already spoken for. Good live agents wanted everywhere. Send for catalog and agency proposition.

SELDEN MOTOR VEHICLE COMPANY, Rochester, N. Y.

Members A. L. A. M.

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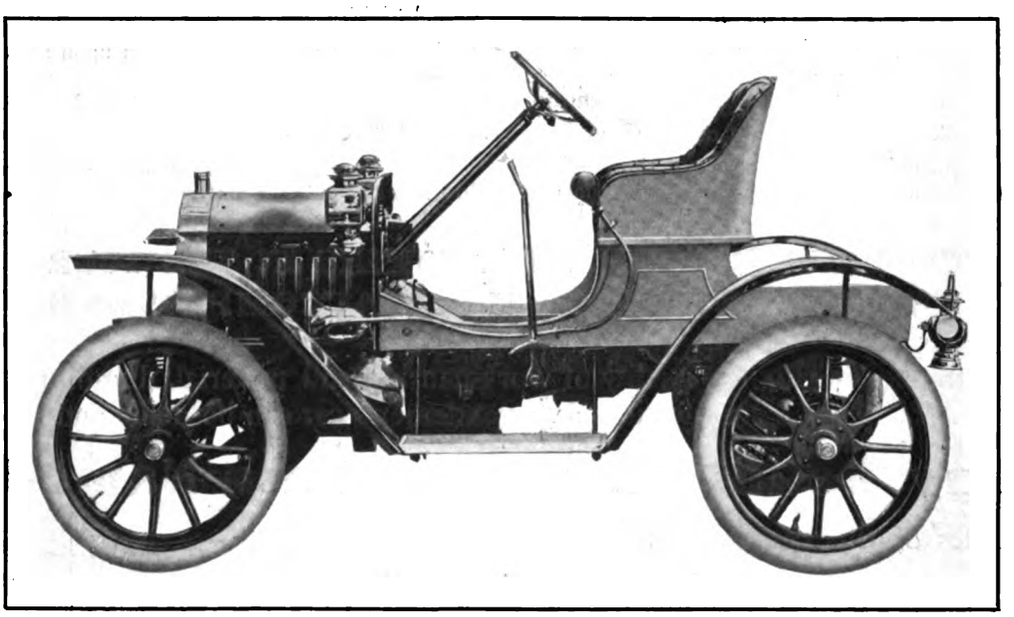
BRUSH RUNABOUT WINS

THE SILVER CUP IN ITS CLASS AT THE

Fourth Annual Algonquin Hill Climb

OF THE CHICAGO MOTOR CLUB

against the Buick, Chalmers-Detroit, Moline and Jackson



MODEL B BRUSH RUNABOUT

There is nothing strange about the Brush Runabout winning hill climbs, endurance runs and such contests. It is not a toy as some would lead you to believe. It is a simple design made well—not a complicated design made cheaply.

The best demonstration of all of the Brush Runabout performance is the big Efficiency Run of five cars, now closing. They have stood up without trouble, worry or annoyance on this run, over every conceivable sort of road—sand, mud, rocks, hills, as they happen—everywhere between Boston, Washington, Kansas City, Minneapolis and Detroit. Write for booklet soon to be issued giving the data on this run.

Brush Runabout Co., Detroit, Mich.

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You Can Afford the $2000 Mitchell

—Afford to **buy** it because it is moderate in price.

We know you can afford to **keep** it, because we have many letters from users of Mitchell, testifying from actual daily experience, that it is the most economical car to **operate.** Before **you** buy a car, send for these letters and try a Mitchell in a 50 or 100-mile road test.

In demonstration, you'll notice not only that its style, finish and construction is equal to that of the extravagantly high priced cars, but that its **performance is too.**

Proof is easy, Mr. Business Man.

The Mitchell Agent will be glad to take you out at any time you say. Just call him up—no obligation on your part.

Try the $2,000 Touring Car—the $2,800 Limousine—the $1,250 Roadster or the $1,000 Runabout.

Get demonstrations of high priced cars and compare the Mitchell with them.

Call up the Mitchell Agent to-day and just say

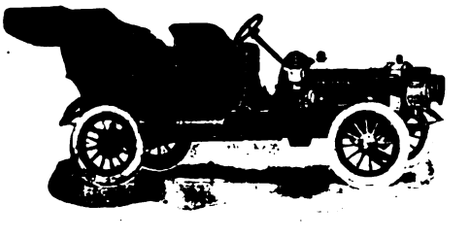
"Show Me."

The Mitchell Touring Car shown below is 35 H. P.—4-cylinder—speed, 50 miles—finish, Mitchell blue—price, $2,000.

Write for Catalogue No. 18, describing the other Mitchell models.

Mitchell Motor Car Co., 285 Mitchell street, Racine, Wis.

Standard Manufacturers,
A. M. C. M. A.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



"Just Open the Throttle and Steer"

The above phrase summarizes the directions for operating the White Steam Car. No other car even approaches the White in the simplicity of the operations of driving. In the White, all speeds from zero to maximum are obtained by throttle control. There is no clutch, no changing of gears and no "cranking." The working parts do not need to be readjusted with each change in the atmospheric conditions. There are no "hit-and-miss" electrical devices and all parts of the mechanism are positive in their action. The supply of water and the supply of fuel are automatically controlled so that the temperature and pressure of the steam remain constant, without in any way engaging or requiring the attention of the operator. The White is thus the favorite car with those who wish to drive and to take care of their own machines.

A Postal to us Brings a "White Steamer Education" by Return Mail

THE WHITE COMPANY

CLEVELAND, OHIO

PITTSBURG, 138-48 Beatty St. ATLANTA, 120-122 Marietta St.
SAN FRANCISCO, 1460 Market St. CLEVELAND, 407 Rockwell Ave.
NEW YORK CITY, Broadway at 62d St. BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St. CHICAGO, 240 Michigan Ave.

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Rambler

Model 34



Price, $2,250
Other Models, $1,200 to $2,500

TRY IT ON THE HILLS

Test this car at half speed on a hill or sand road where power and every ounce of it is needed. Notice how steadily and powerfully it pulls when running slowly under load.

The capacity of the offset crank shaft for doing this extra work is most noticeable at low engine speeds. All that power which in other engines is lost through friction on the bearings and cylinder walls, is added to the driving force by the Rambler offset crank shaft. It reduces friction; eliminates hammer on bearings; gives more power.

The straight line drive delivers the power direct and with least frictional loss to the rear axle. Let us demonstra e these features and the silence and the comfort of this car.

Tell our nearest representative to call at your home and take you to your place of business some morning in a Rambler. Or write your name and address and "Model 34" on a postal and mail to us today.

THE CAR OF STEADY SERVICE

Thomas B. Jeffery & Company, Main Office and Factory: **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, August 20, 1908. No. 21

MERGER PLAN APPEARS TO HALT

Rumored Hitch in Proposed Maxwell-Briscoe and Buick Amalgamation—Official Confirmation or Denial Withheld.

According to reports, a serious hitch has developed in the proposed amalgamation of the Maxwell-Briscoe and Buick interests into the projected "International Motor Co." with a capitalization of $25,000,000 more or less; indeed, one report states that all negotiations in this direction have been abandoned.

Confirmation of the stories, however, is not possible. Benjamin Briscoe, the president of the Maxwell-Briscoe Motor Co., is at present in the West where he will remain for a couple of weeks, ostensibly seeing western agents, although the portion of his time that is being spent in Chicago is suggested as having a bearing on the proposed merger. He could not be reached, of course, and the treasurer of the company, Richard Irvin, whose law and banking offices at 25 Broad street, New York, hold most of the details and transactions in connection with the negotiations, when asked yesterday as to the truth of the report that the plans for the combine has been dropped, said that he was in such a position at present that he could affirm or deny nothing in relation to the situation.

Motor Car Planning to Leave Detroit.

Pressed for a decision like a maid with two ardent suitors, the Motor Car Co., of Detroit, Mich., is undecided whether to move to an Ohio town that wants it or to a Michigan location that is making heavy inducements. In either event, the removal of the company's works from Detroit will take place in the not distant future.

Franklin Settles Foreign Suit.

Litigation between the H. H. Franklin Mfg. Co. and Messrs. Vander Wielen & Schwiebbe, of Belgium, in the matter of cancellation of trade mark "Franklin" registered in that country to cover automobiles, etc., has been terminated successfully by judgment of the court and agreement on the part of Vander Wielen & Schwiebbe allowing the Franklin company's registration to stand so far as automobiles and automobile parts are concerned; Vander Wielen & Schwiebbe, however, retain the registration so far as it applies to bicycles, bicycle parts, etc.

Herreshoff to Build Automobiles.

Charles F. Herreshoff, the Bridgeport (Conn.) inventor, designer and builder of the Den, the speedy motor boat, has severed his connection with the American & British Co., of Bridgeport, and is about to remove to Detroit, where there already has been organized under the laws of Michigan the Herreshoff Automobile Co. Herreshoff has designed a light automobile motor which he anticipates will create something of a furore and which will be incorporated in a car which will be produced by his new company in Detroit.

Bendix After Logansport Capital.

The citizens of Logansport, Ind., are being asked to subscribe for $75,000 worth of 6 per cent. stock in the Bendix Automobile Co., of Chicago, in return for which favor the Bendix concern will build a factory "in their midst," guaranteed to employ 200 men. The Logansport Industrial Association is looking into the project.

Rock Creek in Receiver's Hands.

With liabilities exceeding $16,000 and assets estimated by the proprietors at $26,000, the Rock Creek Auto and Wagon Works, of Washington, D. C., has gone into the hands of a receiver. Attorney Charles F. Diggs has been appointed to act in this capacity.

Forge Concern to Make Runabouts.

The Sizer Forge Co., Buffalo, N. Y., is working on the plans of a high-powered runabout with a view of engaging in its manufacture. They are in the market for a number of the necessary components.

MAY SELL POPE-WAVERLY PLANT

Receivers Get Favorable Offer for the Indianapolis Property—Negotiations in Progress Through Broker.

It is not improbable that the receivers of the Pope Mfg. Co. shortly will dispose of the Pope-Waverly plant in Indianapolis. It is known that an offer, accompanied by a substantial cash deposit, has been made for the property and that the receivers will ask the courts to set a date for a hearing on the proposal. It is expected that this application will be made to-day.

While a report from the West states the amount offered for the plant is $300,000, the report lacks authentication. Nothing definite has leaked out regarding this item, nor is the identity of the prospective purchasers traceable. They are conducting negotiations through an Indianapolis broker.

Shortly after the Pope Motor Car Co. went into the hands of receivers a quiet effort was made to form a company to purchase the Waverly plant, the movement going as far as the printing of a prospectus of the "Waverly Motor Car Co." Nothing came of it, however, and the present negotiations are said to have no connection whatsoever with the earlier movement.

Kissel Shot by Angry Employe.

L. Kissel, of the Kissel Motor Car Co., of Hartford, Wis., was yesterday shot by John Gerbier, an enraged employe, at the company's store in Milwaukee. Two bullets entered his head and one shot penetrated his stomach. As Kissel is 70 years old, his recovery is doubtful.

Plow Makers May Build Buggies.

The Shunk Plow Co., Bucyrus, Ohio, has built two motor buggies and now is testing them on the road, with a view of engaging in the manufacture of such vehicles. A definite decision will be reached after the test is completed.

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IN THE RETAIL WORLD.

Armin E. Mill has opened a repair shop at 114-116 Brady street, Allijan, Mich.

A petition in bankruptcy has been filed against the Charleston Motor Co., Charleston, S. C.

G. A. Boener is building a garage at Cedarburg, Wis. He will rent cars, do repair work and deal in automobile supplies.

Burkhard Brothers are opening a big garage on Main street, St. Joseph, Mich. A renting service will also be maintained.

The W. H. Ellis Motor Car Co., Newark, N. J., will occupy its new garage and salesroom on Washington street, about September 1st.

W. O. Reilly, who has been operating an automobile livery between Greenbush and Roseau, Minn., has arranged to extend his business to Crookston.

George Stephenson's garage, 1543 Clarkson street, Denver, Col., was burned on the 13th inst. Two automobiles valued at $4,000 were rendered useless.

The Winton branch at Minneapolis, Minn., soon will be housed permanently in its own new building on Eighth street, north, near Hennepin avenue.

The Buick-Losey Automobile Co., of Indianapolis, has removed its sales and repairing rooms from Massachusetts avenue to 130-132 East New York street.

J. J. Cleary, 815 South Kedzie avenue, Chicago, has started a well equipped garage. Renting and repairing will be done, in addition to the regular garage service.

Leo F. N. Baldwin has bought out B. F. Blackington's interest in the Central Automobile Exchange, Fountain street, Providence, R. I., and now is sole proprietor of the business.

A White Garage has been established in San Diego, Cal., and another shortly will be located in Santa Barbara in the same State. Both will be branches of the White Garage of Los Angeles.

J. B. Kleese's garage, near Wick avenue and Wood street, Youngstown, Ohio, was burned Thursday, 30th ult. The bicycle repair shop of H. E. Woodworth, adjoining it, was badly damaged.

Robert Veltum and R. B. Wray, of Eugene, Ore., have formed a partnership to conduct an automobile business. Wray already has an agency, and the new firm plans establishing a well equipped garage.

The Diamond Rubber Co. will transfer its Boston branch to new quarters in the Pope building, 223 Columbus avenue, on September 1st. The branch has outgrown its present quarters at 174 Columbus avenue.

The Buick Motor Co., of Flint, Mich., has acquired the Buick-Waller Automobile Co., of Grand Rapids, for the purpose of establishing a western Michigan branch there. George W. Waller will be the manager.

Chester C. Henry opened this week in Newark, N. J., a new establishment where he will handle second hand cars during the summer, taking on a full line of a standard make of car next fall. His location is 283-285 Halsey street.

By a fire at Polk and Golden Gate avenue, San Francisco, on Monday, 3d inst., the Standard Motor Car Co., 503-5 Golden Gate avenue, lost its establishment. Three automobiles were the only propery saved. The loss is placed at $10,000.

The Utica Motor Car Co., of Utica, N. Y., has purchased the business of the Genesee Automobile Co., of Syracuse, N. Y., and will henceforth conduct establishments in both cities. The Genesee garage in Syracuse is at 242 West Genesee street.

H. C. Taylor, formerly of San Francisco, and J. H. Madison, of Petaluma, Cal., have formed a partnership and are fitting up a garage in the Hess block on Main street, Petaluma. They will handle automobiles, automobile supplies and sporting goods.

The garage and office of the White company at 220 Sixth street, S., Minneapolis, has been remodeled and redecorated. The front of the building, which formerly was occupied by the American Automobile Co., has been newly finished in white enamel.

Work was begun July 17th on the new garage at 233 Halsey street, Newark, N. J., to be occupied by the Atlantic Motor Car Co. The building will be three stories high, with a frontage of 50 feet on Halsey street, and will be constructed of fireproof brick.

A new tire house has been started in Wheeling, W. Va., to do a general agency and repair business. It is the Griffin Auto Tire Repair Works, located at Fourteenth and Chapline streets. Full equipment for extensive repair work has been installed.

Fred Weinmann has opened a garage at 1649 Vincennes avenue, Chicago Heights, Ill. He has an agency for the Cartercar and deals in motorcycles, bicycles, tires and general supplies. The garage is equipped with facilities for charging, vulcanizing and repairing.

The Boston store of the Dow Tire Co., has been removed to larger quarters. A commodious store at 889 Boylston street, in the newer automobile district, has been taken and a full stock of the Dow non-deflation tubes will be carried both for wholesale and retail purposes.

Paul Mulvane, Topeka, Kan., has sold his garage and automobile repair business at Seventh and Quincy streets, to Terry Stafford, formerly superintendent at the Smith automobile factory. He retains the tire and supply department of his business and will continue at the same location.

C. M. Coats is planning for the erection of a new garage on South Lasalle street, Aurora, Ill. The building will be constructed of cement and will be 160x60 feet in ground dimensions. The equipment will be thoroughly up to date, and a machine shop will form part of the establishment. Coats is located at present on South Water street.

The Thomas Flyer Renting Agency is a new branch of enterprise which Harry S. Houpt has added to his business at Broadway and Sixty-third street, New York City. Cars with either touring or limousine bodies are rented out, with drivers in correct livery, and the parties hiring them can put on all the front of private owners. Special rates are made for day trips.

Thomas B. Jeffery & Co., makers of the Rambler automobile, in the name of the Rambler Garage Co. of Chicago, will erect at 1218 Sheridan road, a 45-foot addition to the present spacious garage which has a 100-foot frontage. The addition will be three stories high, and will cost approximately $20,000. When completed it is claimed that the garage will be the largest public structure of the sort in this country.

The Chelsea Auto Storage Co., of 520 West Thirty-seventh street, New York City, is in proceedings for the dissolution of the corporation, and Judge Erlanger of the Supreme Court has appointed Arthur D. Truax as receiver. The action is brought by Directors Arthur M. Von, Lester F. Albro, and Clement L. Stephenson. The business was started several years ago by Von and Albro, and was incorporated April 10, 1907, with a capital stock of $75,000. The present assets are $1,150.

Pope Receivers Report for July.

According to the report of the receivers of the Pope Mfg. Co. in Connecticut, for the month of July, with the clerk of the Superior Court at Hartford, the cash balance in the banks and at the office at the end of the month was $326,363.29, while at the first of the month it was $587,338.47. This lessening of the cash was largely due to a transfer of $300,000 to the receivers in New Jersey for the payment of a second creditors' dividend. The receipts for the month were $121,658.30, of which the chief item was $99,227.16 in sales. The disbursements for the month were $382,633.48, of which $300,000 went to the receivers in New Jersey, as stated, while $76,871.83 was spent in materials and supplies, pay rolls, selling expenses, taxe and royalties. The last item amounted to $11,742. In addition, liabilities for materials, pay rolls, etc., accrued to the amount of $23,031, together with an interchange of liabilities and credits with the receivers in the other districts.

Castle Did Not Make the Motion.

It transpires that Fred Castle was not the member of the Motor and Accessory Manufacturers who, at Atlantic City, introduced the resolution committing the organization against participation in the next Chicago show unless the price of space is reduced. The report to that effect did Mr. Castle an injustice and apparently grew out of the fact that it was he who made known that the executive committee had taken action of the sort.

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THE WEEK'S INCORPORATIONS.

Chicago, Ill.—Berliet Import Co., under Illinois laws, with $2,500 capital; to deal in automobiles and machinery and parts therefor.

Denver, Colo.—Auto General Supply Co., The, under Colorado laws, with $18,000 capital. Corporators—J. C. McGill, George H. Phelps.

Chicago, Ill.—Perfection Emergency Tire Co., under Illinois laws, with $25,000 capital. Corporators—G. C. Grable, W. R. Hartley, D. W. Norris.

Dover, Del.—Co-operative Garage Co., under Delaware laws, with $150,000 capital. Corporators—J. W. Ebbs, F. H. Lord, H. H. Nieman, New York City, N. Y.

Cleveland, O.—Cleveland Auto Cab Co., under Ohio laws, with $150,000 capital. Corporators—A. C. Miller, J. C. Brooks, A. T. Welch, M. C. Mulhall, George A. Howells.

Boston, Mass.—Taxi Service Co., under Massachusetts laws, with $120,000 capital; transportation business. Corporators— J. L Miller, Boston; C. F. Lovejoy, Lynn, Mass.

Richmond, Va.—Foster Motor Car Co., under Virginia laws, with $3,000 to $10,000 capital. Corporators— C. L. Young, Norfolk, Va.; L. M. Foster, Nixon Ball, Richmond, Va.

Chicago, Ill.—Cross Tread Anti-Skid Co., under Illinois laws, with $5,000 capital; to manufacture automobile accessories. Corporators—J. J. Sheridan, C. R. Murphy, C. G. Hutchinson.

Milwaukee, Wis.—W. L. Hibbard Motor Car Co., The, under Wisconsin laws, with $50,000 capital; garage business. Corporators—William L. Hibbard, William T. Bradley, James A. Wright.

Jersey City, N. J.—McKeen Motor Car Co., under New Jersey laws, with $1,000,000 capital; to manufacture motor cars and engines. Corporators—G. E. Downes, B. F. Russell, T. F. Barrett.

Cortland, O.—Cortland Transfer Co., The, under Ohio laws, with $10,000 capital; to operate automobile line. Corporators—Lewis Hutton, E. E. Faunce, J. H. Faunce, F. M. Griffin, H. S. Post.

Chicago, Ill.—Crescent Motor Car Co., under Illinois laws, with $100.000 capital; to manufacture and deal in motor cars and auxiliary machinery. Corporators—F. D. Moor, C. P. Hatter, W. J. Crumpton.

Chicago, Ill.—Standard Automobile Supply Co., under Illinois laws, with $10,000 capital; to manufacture and deal in automobiles, etc. Corporators—W. F. McCarthy, George B. Levy, A. S. Henley.

New York City, N. Y.—Goodman Sales Co., under New York laws, with $500 capital; automobiles. Corporators—Edwin D. Hayes, Martin C. Ansorge, Joseph Thomas, 115 Broadway, New York City, N. Y.

New York City, N. Y.—Detroit Cadillac Motor Car Co., under New York laws, with $5,000 capital. Corporators—William H. Murphy and Wilfred Leland, Detroit, Mich.; Henry B. Potter, New York City, N. Y.

Buffalo, N. Y.—Brunn's Carriage Mfg. Co., under New York laws, with $100,000 capital; to manufacture wagons, carriages, automobiles, etc. Corporators—H. Brunn, E. W. Harrington, F. A. James, Buffalo, N. Y.

Los Angeles, Cal.—Western Multi-Motor Co., under California laws, with $200,000 capital. Corporators—John Braunwalder, Robert B. Macintosh, Irving B. Stillan, Helen M. Braunwalder, Elise M. Macintosh.

Grand Rapids, Mich.—Muller Auto Mfg. Co., under Michigan laws, with $2,000 capital. Corporators—Joseph Renihan, William A. Bates, William F. Stadel, Charles E. Hessey, A. J. Miller, Harry W. Bissell, Michael Colleton.

Buffalo, N. Y.—Chief Motor Co., under New York laws, with $250,000 capital. Corporators—Earl W. Bailey, 27 Putnam street; G. Willis Wheeler, 80 Ashland avenue; Porteus R. Cunningham, 168 Richmond avenue, Buffalo, N. Y.

New York City, N. Y.—George H. Tyrrell Co., The, under New York laws, with $5,000 capital; garage. Corporators—George H. Tyrrell, Joseph F. Althause, 2639 Webster ave.; William F. Burrough, 280 Broadway, New York City, N. Y.

Hasbrouck Heights, N. J.—Enterprise Automobile Co., under New Jersey laws, with $100,000 capital; to manufacture automobiles, engines, etc. Corporators—J. F. Coleman, J. L. Lotsch, E. S. H. B. Schultz, Hasbrouck Heights, N. J.

New York City, N. Y.—Co-operative Garage Co., under New York laws, with $10,000 capital. Corporators—J. Reibstein, 76 William street, E. W. Webb., 15 William street, New York City, N. Y.; F. L. Tyson, 44 Court street, Brooklyn.

New York City, N. Y.—Broc Auto Ignition and Supply Co., under New York laws, with $5,000 capital. Corporators—Paul L. Snutzel, 116 Nassau street; James Parkes, 15 Wall street; Albert De Barres, 1692 Broadway, New York City, N. Y.

New York City, N. Y.—Suburban Auto Express Co., under New York laws, with $25,000 capital; transfer and express business. Corporators—A. N. Bingham, New Rochelle, N. Y.; R. G. Hamilton, New York City, N. Y.; M. M. Whipple, Brooklyn, N. Y.

New York City, N. Y.—Moon Motor Car Co. of New York, under New York laws, with $5,000 capital. Corporators—Charles A. Duerr, 325 West Ninety-third street; Edward W. Elverson, 2186 Broadway; Harry Eckhard, 111 Broadway, New York City, N. Y.

New York City, N. Y.—Knickerbocker Tire and Repair Co., under New York laws, with $10,000 capital. Corporators—William J. Staunton, 321 Pacific avenue, Jersey City, N. J.; John J. Walsh, 229 West 148th street, Charles P. Bispham, 601 West 169th street, New York City, N. Y.

Ogden, Utah—Ogden Canyon Automobile Co., under Utah laws, with $25,000 capital; to operate line of sight seeing cars. Corporators—J. S. Corlow, Albert Scowcroft, Joseph Decker, D. A. Smyth, M. S. Browning.

Wilmington, Del.—Auto Co. of Wilmington, The, under Delaware laws, with $10,000 capital; to deal in automobiles and automobile supplies, gas engines, etc. Corporators—A. B. Wilding, George B. Elliott, C. E. Taylor, W. D. MacMillan and Morris Bretzfelderall, Wilmington, Del.

New York City, N. Y.—Willis Cab and Auto Co., under New York laws, with $85,000 capital; to deal in horses, to manufacture and deal in carriages, automobiles, etc., livery and boarding stable business. Corporators—J. S. Walton, A. J. Wolff, A. B. Stopel, New York City, N. Y.

Bristol Engineering Co. Incorporates.

The Bristol Engineering Co., which already has begun making "blue cabs" for the American Taxameter Cab Co., has filed a certificate of incorporation under the laws of Connecticut. This disclosed that the concern is capitalized at $500,000. The manufacture of taximeter cabs and automobiles is specified as its object. The incorporators are Albert F. Rockwell, president of the New Departure Mfg. Co.; De Witt Page and Charles Treadway, all of Bristol, Conn.

To Make Motor Buggies in Jacksonville.

Stumps and rocks, mud and ditches, make a special type of automobile more or less necessary for use in Florida, and to meet the demand for a style of vehicle that is suitable, the Southern Automobile Mfg. Co. has started operations in Jacksonville. The product will be a motor buggy with an especially high clearance, a 12 horsepower air-cooled model to sell for $500, and a 20 horsepower, water-cooled model for $650.

Grand Haven Has Vision of a Factory.

Having "solved the gasolene engine problem," Charles Boyden, of Grand Haven, Mich., is dangling the possibilities of an automobile factory before the citizens of Holland, a town in the same state. Capitalists in the latter place have been interested to a point where a meeting is to be held to pass on the proposition of backing the proposed plant.

Pontiac Concern to Assemble Cars.

Heavily laden with name, the Schuler-Morris-Jones Motor Car and Electric Co. has started up in Pontiac, Mich, to manufacture a line of cars from standard parts. It will also do rebuilding and repair work.

Brush Catches on in South America.

Brush runabouts are "catching on" in South America. The Brush Runabout Co. have just closed with Pratt & Co., of Buenos Aires, for their sale in Argentina.

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FRANKLIN Automobiles

If talking built automobiles there would be a number of them like the Franklin this year.

There never was a heavy over-weighted Franklin automobile. There never was one without good big carrying ability and speed and power in proportion to its weight; never one that didn't wear phenomenally and cool perfectly, and do its work at the lowest operating cost. And there never was a hard-riding Franklin.

The Franklin has always been simple and compact and superbly high grade; roomy and luxurious without awkward bulkiness; and extremely facile to manage and control.

We have always contended that this is the only practical sensible kind of an automobile for American roads and city streets. We have refined and developed the Franklin consistently along this same line from the start, seven years ago.

Other manufacturers laughed at our ideas then. To-day, the more wide-awake ones are trying to copy them.

But the Franklin qualities are built into the automobile. They are founded in the Franklin design. You cannot produce the combination of efficient high power with strength, light weight and easy-riding quality except through the Franklin air-cooled engine, the Franklin laminated wood frame and the Franklin full-elliptic spring suspension.

You cannot talk these qualities into existence. You cannot produce them at their best in a day or a year.

According to the old proverb—"A stern chase is ever a long one."

Weigh any Franklin; ride in it; look into its operating cost and its endurance; look at the Franklin record in the great economy test, the famous run across America, the Chicago to New York run, and the latest Glidden Tour. Then judge for yourself how near any other automobile has yet come to the Franklin standard.

16 H. P. 4-cylinder Runabout	$1,750	16 H. P. 4-cyl. Touring-car	$1,850
28 H. P. 4-cyl. Touring-car or Runabout.	2,850	42 H. P. 6-cyl. Touring-car or Runabout.	4,000

F. O. B. Syracuse.

Write for 1909 catalogue.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, AUGUST 20, 1908.

Credit Where Credit is Due.

Farcical as was the plan for the so-called New York to Paris "race" in its original conception, including as it did a route through portions of Alaska and Northern Siberia, where the dragging of the cars on dog sledges as freight obviously would have been necessary, the later modifications of the itinerary served to bring it more within the bounds of common sense, and the actual performance of the winning Thomas car was such as in itself to redeem the whole affair from the absurdity which threatened it.

No matter how loose and ill-considered the ideas of the promoters of the contest may have been as to its conduct, the steady and faithful work of the one American competitor in plugging ahead on its own power for 12,116 miles, following the prescribed course and in ultimately getting to the point it set out for, without resort to railroad trains or similar aids on land, is justly calculated to arouse not only admiration but enthusiasm. If the promoters did nothing more than set in motion so striking an exhibition of grit and endurance on the part of the successful drivers and the demonstration of more or less typical advantages and points of superiority in American automobile design and construction for hard tourinug service, they are entitled to a certain measure of credit.

Effect of Hats on Limousines.

Fashion as a governing factor in automobile design, and more particularly in respect to the construction of bodies, has long been recognized as of marked weight. Further, that the fair sex exercises a strong influence on the sales of certain models and so has come to be directly catered to by the body designer also is known. But that changes in the mode of feminine garb could in any way be expected to control the layout of automobile bodies never would be suspected. Nevertheless such is the case. In proof of which it is announced that the heights of forthcoming limousine bodies from floor to ceiling will be somewhere about two inches lower. The only reason to which this change is ascribed is found in the forecasted lowering of fashionable headgear during the coming winter.

A striking instance of the way in which the automobile designer is forced to attend to the most trivial and apparently irrelevant matters, is furnished by the case in point. Before deciding upon the heights of his limousine designs, for example, one New England body maker, who numbers among his patrons several of the best known makers in the country, was at some pains to communicate with representative milliners in New York City in order to obtain authority for the change. For it must be understood that inconsequential as it may appear, this very item might prove the deciding factor in the choice of a car which was to be used almost wholly for evening and afternoon duty about town. With the absolute assurance that hats are coming down this fall, the designs in contemplation were carried forward with absolute confidence of their ready acceptance at the hands of the public.

Another, though less striking example of the same principle is found in the case of a car manufacturer in the Middle West who makes it a point to carry in stock a complete line of top, upholstery and floor covering materials in various colors and to keep a certain fixed number of stock bodies on hand at all times worked up to the color coat, but not finished. By this means customers are enabled to make an absolute selection of finishing materials and colors and to secure what is virtually a "special finish" order in but little more time than would be required for a stock delivery from the factory. The object of this is plainly that of catering to the wishes of the buyers' wives quite as much as to any strong inclination on the part of the buyers themselves to adopt any but the standard finish chosen by the maker for the bulk of his output. It is not difficult to pick out other instances of a less conspicuous nature in which the effort is made to exert a direct appeal upon the ladies. That such appeals have equally direct and evident effect upon the market is beyond question, though the fact is not generally appreciated.

The Matter of Sanctions.

Why the Lowell Automobile Club or any other organization or any person should be bluffed into seeking a guarantee or promise from the misnamed Automobile Club of America that it will not disqualify entrants in events, such as the Lowell road race, that are sanctioned by the American Automobile Association, is at once comprehensible and incomprehensible.

If such clubs or persons understood that a large part of the anti-A. A. A. stuff that appears in the New York newspapers, and which is copied by other prints, is the work of paid press agents and men with grievances, and that much of the remainder is "colored" by aggrieved reporters to whom the Automobile Club of America, of New York, has presented what are practically free cards of membership, such clubs or persons very readily would discover the quality of the milk in the A. C. A. cocoanut.

When the Automobile Club of America this week announced that any man or car, or maker or agent of such car, who competes in an "international race" not sanctioned by itself, men and car alike will be disqualified from competing in such races both here and abroad, it could go no further. As the accredited Guardian of Europe's Interests in America the step is perfectly logical. Its officials well know what every unbiased man knows, i. e., that the extent of its dominion begins and ends there. As the Vanderbilt cup race is the only recognized "international race" run in this country, this dominion is extensively

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circumscribed. Every unbiased man knows as well that the body which controls and administers the sport in this country is the American Automobile Association, and it is the only organization with which any sports promoter need deal. It will be a sorry day for real Americans—importers and "soreheads" excepted—when the Recognized Automobile Clubs of Europe, through the Automobile Club of America, or any other club, for that matter, can control or dominate the sport on these shores.

Anyone who applies to the A. C. A. for a "sanction" or who fears its "disqualification" either is ignorant of the situation or is easily bluffed. The A. C. A. is first and last a purely local club, even if Europe is so blind that it cannot discern this glaring truth.

The Motor World holds no brief for the American Automobile Association. On occasion, it has not spared criticism, but it is the recognized American national institution, and is of, for and by Americans. Its sanctions are the only sanctions required in America, and the penalty for failure to obtain them is clearly defined by its rules. It is the hope of the Motor World that in bringing these rules to bear, the association will not temporize, but will apply them promptly and with vigor and thoroughness.

Influence of Prices of Replacements.

Interchangeable production when carried out on a large scale brings with it other advantages besides that of reducing the first cost of the finished product. Among them one which has not as yet received its due of public notice is that of the reduced cost of replacements. Formerly, whatever exorbitant charges may have been levied upon the buyer of a car, his continuous use of it was rewarded almost without exception by charges on the inevitable replacements which amounted in many cases to what he not inaptly termed robbery. The immediate result was to swell the cost of car maintenance to a totally disproportionate figure and to help to sustain the expensive reputation of the machine. That a number of makers have been able, by virtue of improved methods of manufacture to eliminate these exaggerated costs is a strong point in their favor.

A telling instance of the way in which this movement may affect the local markets recently developed in a study of garage conditions in the West. It was found that in one city car owners and repairmen, whenever possible, were purchasing certain replacements from the stock of a particular agent regardless of the make of car involved. The secret of the large parts business done by this dealer turned out to be the extremely low price asked by the maker whom he represented for all extras and replacements on his own machines.

These prices were so in contrast to those asked by other makers that in one case the remark was made: "After having my eyes opened, I am certain that were I about to buy another car, I should be influenced very largely by the economy of upkeep which this maker brings about by the reasonable prices asked for his extra parts."

The advantage to the maker who is in a position to supply replacements at very low figures needs no comment. The ability to quote advantageous prices on such parts is an index of close methods of interchangeable production which in itself is a good advertisement of careful construction of the finished car. The successful marketing of such a product should constitute a useful weapon of publicity and it is surprising that those makers who are in a position to do so have not made more capital of it.

As the cauldron of national politics begins to bubble, preparatory to its imminent seething, the gravest anxiety rests on the respective campaign managers as to which banner the Professional Chauffeurs Club of America will choose as a standard under which to carry out its resolution to "take an active and energetic part in the coming campaign for the election of a president of the United States." Inasmuch as the club has decided that "there hardly is any other collection of individuals that can do more to bring about the election of a president" the political situation is peculiarly intense until the presidential candidates and the public can learn which way the cat is going to jump, and whether the club members will lean to Labor, of which they are part, or to Capital, on whose prosperity they are exceptionally dependent. That candidate who first espouses the club's "platform" for the abolition of speed traps and the removal of justices of the peace whose minds are on the bias, will have the first call on the privilege of moving his household effects into the White House, despite the constitutional prohibitions on his meddling with the purely state and municipal matters that the chauffeur president-selectors so gravely offer as national issues.

COMING EVENTS

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

September 5-9, Los Angeles, Cal.—Automobile Dealers Association's reliability run to San Francisco.

Sept. 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7, Lowell, Mass.—Lowell Automobile Club's 200 miles road race, on Merrimac Valley boulevard.

September 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7-12, Hartford, Conn.—Connecticut State Fair Association's outdoor show and grand circuit races at Charter Oak Park.

September 11, Springfield, Mass.—Springfield Automobile Club's hill climb on Wilbraham hill.

September 12, Louisville, Ky.—Louisville Automobile Club's race meet at Churchill Downs.

September 14, Chicago, Ill.—Chicago Motor Club's annual economy run.

September 20, San Francisco, Cal.—Olympic Athletic Club's race meet at Tanforan Park.

September 23-24, Boston, Mass.—Bay State Automobile Association's 24 hours endurance run, Boston to Bretton Woods, N. H.

October 6-9, Chicago, Ill.—Chicago Motor Club's 1,000 miles reliability run.

October 7, Philadelphia, Pa.—Quaker City Motor Club's 200 miles road race, Fairmount Park.

October 10, Long Island—Elimination trials for Vanderbilt cup contest.

October 24, Long Island.—Vanderbilt cup contest.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

January 23-30, Philadelphia, Pa.—Philadelphia Automobile Trade Association's annual show.

February 6-13, Chicago, Ill.—National Association of Automobile Manufacturers' show, Coliseum.

February 27-March 6, Hartford, Conn.—Automobile Dealers Association's annual show.

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CLIMBING THE ALGONQUIN BUMPS

Good Contests in Chicago's Postponed Meet —Winners by the Watch and Winners by Mathematics.

Scratch the civic pride of a Chicagoan and he will proudly declare that Chicago never does anything by halves—not even in respect to automobile hill climbing contests. While other cities have been content that one hill should suffice for a contest, Chicago, that is, the Chicago Motor Club, last year set the fashion of using two different grades to decide results, which were arrived at by intermixing sport and mathematics.



VIEW OF A SINUOUS ROAD ON PERRY HILL

No other organization saw fit to follow the fashion, but the fact did not discourage the Chicago club, and it again tried the double dose on Friday last, 19th inst., rain having caused a postponement from June last. As Chicago itself is as mountainous as a ball room floor it was necessary to journey to the little town of Algonquin, Ill., in order to find something resembling a hill. There are two of them there, both short and fairly steep—Perry's hill and Phillips's hill, as they are locally known.

The contest was an all-day affair. The morning "matinee" occurred on Perry's and the afternoon performance on Phillips', and the shades of night were falling fast before anyone knew who was who or what was what. For being run on the mathematical plan, it was not until the wise men with nimble pencils had multiplied, subtracted and divided and otherwise indulged in mental gymnastics that the winners had evolved. This sort of contest carries pleasure even to the many losers. The victory is not always to the swift, and as a result, though the swift may not figure at the top of the mathematicians' tables, they nevertheless may shout from the house tops and in the advertising columns: "We didn't win, but we made the fastest time on Phillips' hill'—or on Perry's hill, as the case may be, all of which is so very enlightening to the great green public that it well may be pardoned for scratching its head.

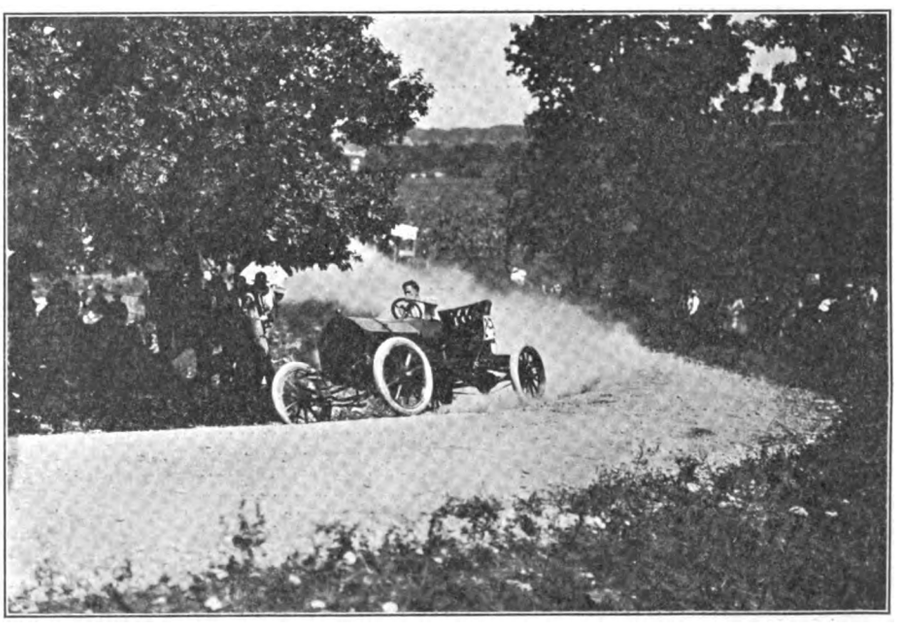
The time of each ascent on each hill was recorded separately, and from these marks the winners were determined in accordance with a formula adopted by the club, which called for a multiplication of the average A. M. and P. M. time, by the piston area, and a division of this result by the weight of the car and driver. Fast time was made in the various classes, although, according to the formula, first place did not necessarily go to the fastest car in every instance. Following the first five events, there were two free-for-alls, the winners of the latter being determined by time alone.

Records for the hills commenced to go, when in the first event, which was for motor buggies, De Launty beat the record of last year by 23 seconds, with his Bendix, although when the percentage was calculated, first place went to Renegar driving a Holzman. In Class B, for light cars with a piston area less than 50 square inches, Lobdell scored decisively at the wheel of a Brush runabout.

Drivers McLean and Miller made good in the next two events, the former in an Apperson making the best percentage of the day in any of the events under the formula. In the class calling for an area of more than 90 square inches, Hoffman was an easy winner in his Pierce mount. In this event, George Salzman, at the wheel of the Thomas "Six," made a showing on Perry's hill when he sent her up the quarter mile 8 per cent. grade in 25⅘ seconds.

Frank Leland was the star of the day when he shot his Stearns "Six" over Phillips' hill in the first free-for-all event at a clip less than a mile a minute. He splintered the record of 33⅕ seconds for the half-mile grade, when he covered it in 0:29⅘, and won the special silver trophy offered by the citizens of Algonquin. In this ascent, Salzman tied with him on the Perry slope, covering it in 24⅗ seconds.

In the second free-for-all, Al Dennison cleaned things up with a Knox, his fast time for the two hills being 0:24⅕ and 0:31. A. W. Greiner, an amateur, made good time in the morning, although he had no one to compete with him in his class.



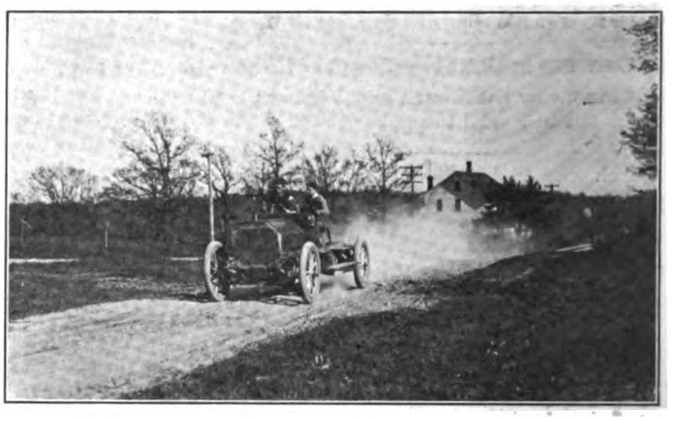
ARTHUR GREINER (THOMAS-DETROIT) WINNING AMATEUR EVENT

Reckless driving by one contestant in both morning and afternoon events injured three people. C. D. Paxon lost control of

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FRANK LELAND (STEARNS) MAKING BEST TIME



PAUL HOFFMAN (PIERCE) AT WINNING SPEED

DIVISION 1.

Class A—Motor Buggies.

Pos.	Driver.	Car.	Time Perry hill.	Time Phillips hill.	A.M. per-centage.	P.M. per-centage.	Total pct.
1	Renegar	Holsman	0:48⅕	1:19⅗	3.030	5.020	8.000
2	Fairbrother	Holsman	0:53⅕	1:25⅘	3.220	5.199	8.419
3	Le Launty	Bendix	0:42⅗	1:10⅘	3.440	5.630	9.034
4	Spanberg	Kiblinger	0:51⅗	1:32⅕	3.362	6.020	9.380
5	McIntyre	Kiblinger	0:55⅕	1:36⅗	3.640	6.360	10,000
6	Scott	Black	0:54⅗	1:16⅘	5.642	7.910	13.552

Class B—Piston Area Under 50 Square Inches.

1	Lobdell	Brush	1:26	2:06	2.870	4.230	7.100
2	Burman	Buick	0:32⅖	0:46⅕	3.039	4.280	7.319
3	Lorimer	Chalmers-Detroit	0:33⅕	0:42	3.325	4.200	7.525
4	Scheifler	Jackson	0:39	0:59⅗	3.350	5.730	9.480
5	Thorne	Moline	0:37⅗	1:01⅖	3.757	6.136	9.893
6	Holmes	Jackson	1:23	1:13⅗	4.688	5.443	10.131

Class C—Piston Area Over 50 Square Inches.

1	McLean	Apperson	0:30⅕	0:40	2.760	3.660	6.420
2	Bird	Corbin	0:26⅘	0:35	3.081	4.110	7.191
3	Smith	Maxwell	0:32⅗	0:44⅘	3.405	4.680	8.085
4	Brown	Wayne	0:28⅕	0:36⅖	3.220	4.800	8.520
5	Halbert	Grout	0:38⅖	0:51⅘	4.064	5.483	9.547
6	Van Dervoort	Moline	0:46	0:42⅖	5.370	4.960	10.330

Class D—Piston Area Over 65 and Under 90 Square Inches.

1	Miller	Cleveland	0:27⅖	0:38⅗	3.210	4.520	7.730
2	Burman	Buick	0:26⅘	0:35⅘	3.490	4.370	7.860
3	Engleback	Stoddard-Dayton	0:26⅗	0:36⅖	3.360	4.560	7.920
4	Lorimer	Thomas-Detroit	0:24⅘	0:35	3.408	4.810	8.218
5	Burns	Thomas-Detroit	0:25	0:33⅖	3.580	4.730	8.310
6	Tilt	Diamond T.	0:28⅕	0:37	3.680	4.820	8.500
7	Rayfield	Tincher	0:26⅗	0:36⅖	4.000	5.480	9.480
8	*Paxon	Jackson	0:26⅕	3:67			

Class E—Piston Area Over 90 Inches.

1	Hofman	Pierce-Arrow	0:25⅘	0:34⅕	3.590	4.510	8.110
2	Apperson	Apperson	0:24⅕	0:31	4.060	5.360	9.420
3	Salzmann	Thomas Flyer	0:25⅖	0:30⅗	5.160	6.210	11.370

DIVISION 2.

Class F—Free-for-All.

Pos.	Driver.	Car.	Perryhill.	Phillips hill.
1	Leland	Stearns "6"	0:24⅗	0:29⅖
2	Salzmann	Thomas Flyer "6"	0:24⅘	0:30
3	Apperson	Apperson "Big Dick"	0:26⅖	0:31
4	Dennison	Knox "6"	0:26⅕	0:31⅖
5	Leland	Stearns "4"	0:26⅗	0:36

Class G—Free-fof-All.

1	Dennison	Knox	0:24⅕	0:31
2	Lorimer	Thomas-Detroit, "Blue-Bird"	0:25⅕	0:31⅘
3	Burns	Thomas-Detroit	0:25⅖	0:33
4	Rayfield	Tincher	0:27	0:35⅗
5	Englebeck	Stoddard-Dayton	0:28⅕	0:35
6	Miller	Stoddard-Dayton	0:28	0:35⅖
7	Tilt	Diamond T.	0:27⅘	0:36⅘
8	Burman	Buick	0:41⅗	0:46⅘
*9	Miller	Cleveland	0:27⅘	

AMATEUR DIVISION.

A. W. Greiner ..... Chalmers-Detroit 0:26⅘
A. W. Greiner ..... Chalmers-Detroit 0:25
(Made morning ascent only and had no competitors.)
* Did not finish.

his mount during the early trials on Perry's hill and when the car reached the summit at high speed, it left the road and slewed into an official tent, barely missing several of the judges. Later in the day, the same driver let his car get away from him while rounding a dangerous curve. The machine charged the large crowd, when it plunged into the roadside, injuring three persons.

Charles W. Van Sickle, while riding a 7 horsepower Indian motorcycle up the incline at a speed of 65 miles an hour, struck a stone and was thrown about 25 feet. Luckily, he picked out a soft spot and landed unhurt. The summaries are given in the accompanying table.

Mechanical Efficiency Test Scheduled.

On September 16 and 17, there will be held a mechanical efficiency test on Long Island, under the auspices of the New York Automobile Trade Association. Arrangements have been made with this body and plans formulated, the actual direction of affairs being in the hands of W. J. Morgan. The contest will start early in the morning from New York and run to Montauk Point, with a halt for luncheon at Blue Point. From Montauk, the night stop, the contestants will, in the morning, return to New York by a different route.

The idea is to hold a price class run, for stock cars, dividing them according to list prices and establishing checking controls along the line. Strict observation of cars' performances will be kept and no repairs, aside from ordinary adjustments will be permitted. There will be two distinct general classes: one for manufacturers and dealers, and the other for amateur owners, driving their cars. There will be eight divisions as regards prices, ranging from $850 to $4.000. A special taxicab division may also be added. Prizes will be awarded to first, second and third places in each class.

Tourists in Turkey are permitted by the customs officials to take six months to pass through the country. On entry, a sum varying from $110 to $176 is levied on a machine. This amount, less 1 per cent. "transit duty," is returned if the car leaves the country within the six months.

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WELCOME TO GLOBE CIRCLING CAR

Gotham Hails Victorious American Entry in New York-Paris Contest—Schuster Tells Story of the Struggle.

It certainly was a glorious reception that was tendered to the three Georges of the New York-Paris Thomas car crew when they arrived home on Saturday, August 15. George Schuster, who drove the victorious car from San Francisco, his mechanician, George Miller and "War Correspondent" George McAdam, were mighty glad to get back to America again and shake hands with E. R. Thomas, Harry S. Houpt, J. E. Bowles, et al.

As soon as the conquering heroes descended the gang plank of the steamer La Lorraine, a string of Thomas cars and one Zust machine, escorted them to the new custom house, where after some delay, the red tape incidental to the clearing of the winning car was accomplished, although the machine itself could not be unloaded from the steamer until the following Monday. From the Custom House, the caravan proceeded to the Stock Exchange. The drivers were introduced to a number of the foremost financiers in the office of A. O. Brown, and from there the party drove through Wall street and up Broadway amid a constant cheering, to the Automobile Club of America, where a luncheon was served.

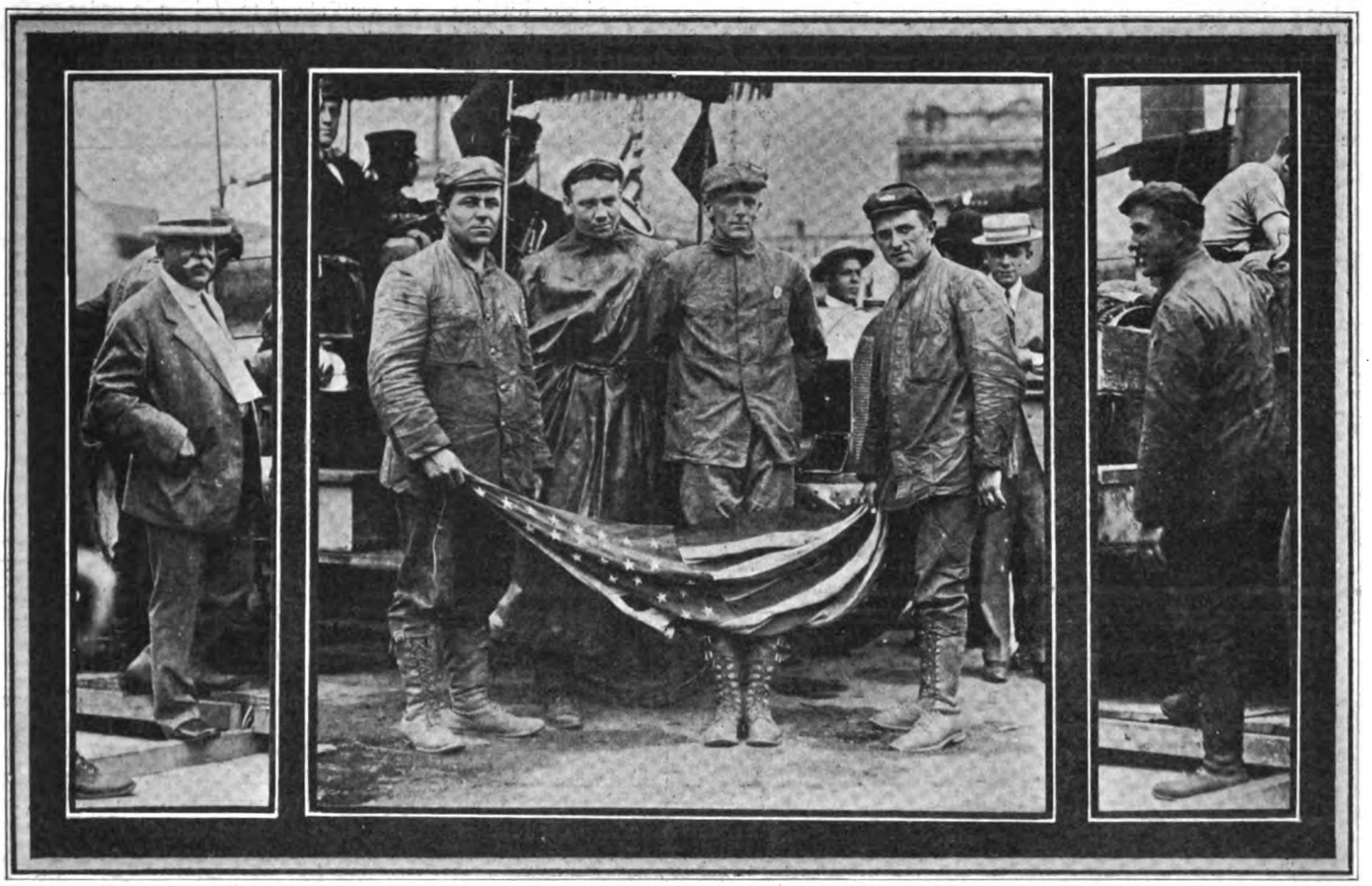
Here Robert Lee Morrell made the formal address of welcome. He praised Mr. Thomas for his sportsmanlike attitude in entering the only American car in the New York-Paris event, and also in the Grand Prix in France. Mr. Thomas replied that while at first he did not take the matter seriously, when the time came, he could not bear to see four foreign flags in a race starting across the United States without the Stars and Stripes. He frankly believed at that time that none of the cars would ever complete the trip. He had been told that it would be impossible for the contestants to cross the State of Wyoming, let alone Siberia, and he was willing to believe it; nevertheless he was confident that an American made car could "size up" with foreigners and go as far as the rest. Later Mr. Thomas, who was extremely modest in mentioning the name of his car, announced that it would be driven back to Buffalo and after a little overhauling would be entered in the 24 hours race at Brighton Beach on September 18th.

Schuster, when called upon, showed that he was more of a driver than an orator, which he admitted; nevertheless he made an interesting little speech, praising Mr. Thomas, Montague Roberts, who drove the car from New York to Cheyenne, and the other drivers, Matthewson, Brinker and Miller, who had helped carry the car to victory. He said it would be a great gratification to him to pilot the car into Buffalo, his native city.

Harry Houpt, the Thomas agent in New York, gave all the credit for entering the car and getting Mr. Thomas interested in the venture, to John E. Bowles, of the Houpt company, who wanted to enter a Thomas car in the race from the very outset.

After George Miller, the smiling mechanician of the crew, had paid a great tribute to his fellow-sufferers in the race and a few more prominent automobilists had said a few words, it was announced that Jefferson De Mont Thompson was ready to award Schuster the $1,000 cash for carrying the American flag around the world. Plans for a banquet this (Thursday) evening, at the Automobile Club of America and a trip to Oyster Bay to introduce the drivers to President Roosevelt next Saturday, were also announced.

But on Monday afternoon, this week, the car itself came into its glory. Preceded by



E. R. THOMAS
Who Made the Journey Possible

MILLER, ROBERTS, McADAM AND SCHUSTER
Three of the Men Who Drove the Car and the Correspondent

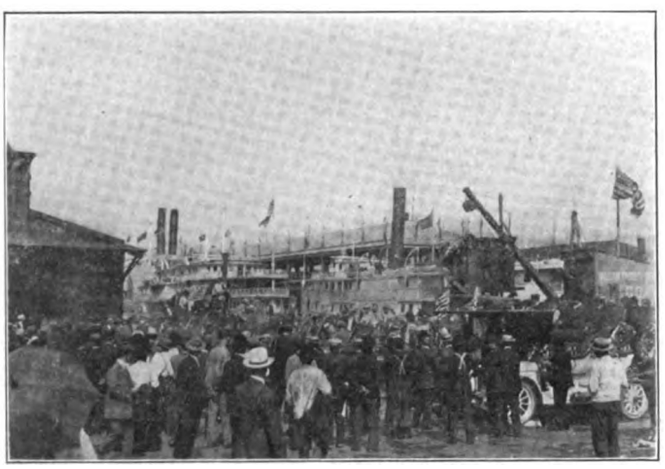
GEORGE SCHUSTER
Who Drove the Car from Seattle

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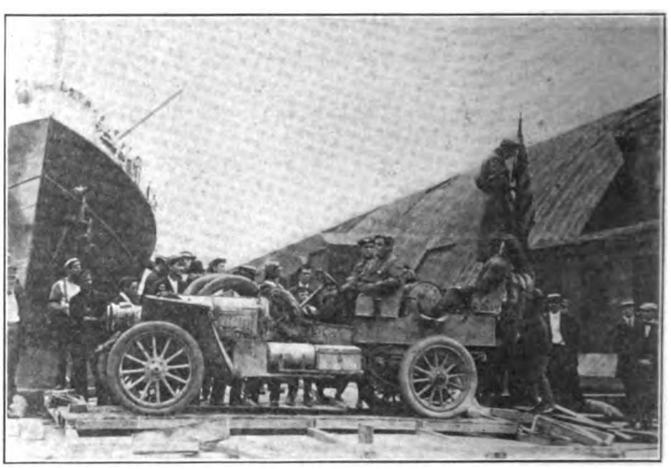
a band playing patriotic airs in a sight-seeing automobile, the doughty battered car, with the flag that it had carried around the globe, led the procession of 50 decorated cars to the City Hall. Schuster was at the wheel, Montague Roberts, Miller and McAdams, being the other occupants, while the following machines carried some of the foremost men in motordom.

The parade made a stop in City Hall Park and the Thomas crew were taken into Acting Mayor McGowan's office and introduced. After making a short speech to the crew, the acting mayor came out and seated himself at the wheel of the victorious car, smiling blandly and praising the wonderful American achievement, the cameras clicking meanwhile.

The procession then streamed up Broadway to the Houpt headquarters, the band banging out inspiring music and the mud-covered winner making more music with its noisy cylinders firing just as efficiently as the day it left Times Square, six months ago.



WELCOMING CROWD AT THE PIER



PREPARING FOR TRIUMPHAL PARADE

On February 12, when this race began, there were six starters, including the American, one German, one Italian and three French cars. One French car, Siziare et Naudin, retired after running a hundred miles on the road; the second French car, the Moto Bloc, ran 1,300 miles to Clinton, Iowa, and then gave up the contest; the third French car, the De Dion, made the trip across the United States to San Francisco, shipped to Seattle, and thence to Japan, thence across Japan, but retired at Vladivostok, while the German Protos car, through a "misunderstanding," was shipped by freight from Idaho to Seattle, being then 1,100 miles and 23 days in time behind the American car.

After the withdrawal of the De Dion car the American, Italian and German cars were left to cross Asia. The Thomas took the lead at the start, but at Pogranitchnaya stripped a driving gear and was delayed five days in repairing the damage. The Protos meantime continued, and, although the Thomas crew made valiant efforts to overtake the Germans, the Protos led into Chita by two days and won the $1,000 cup offered by the Trans-Siberian Railroad for the car arriving first at Chita. The Americans continued in pursuit of the Germans and overtook them on the shores of Lake Baikal, but were unable to load on the boat which carried the Germans across the lake, and were compelled to wait 24 hours for the next boat. A lead was obtained through Irkutsk Kansk and through Krasnojrsk, but they were overtaken at Tomsk, 3,408 miles from Vladivostok. The Thomas led the way from then until it crossed the Russian border, where it again stripped a gear and was delayed five days, allowing the Germans once more to take the lead and show the way into Moscow and St. Petersburg, capturing the second $1,000 prize offered by the Russian Automobile Club. Over the splendid roads of Europe it was an easy matter for the Germans to maintain this advantage into Berlin and Paris. They were two days ahead of the Thomas in Berlin, finishing in Paris the day that the American car reached the Kaiser's capital. The Thomas, with 30 days allowance, took four days for the final run from Berlin to Paris, winning the race by 26 days.

The record of the cars is interesting; it shows the Thomas covered 3,936 miles in America in 42 days, and 8,280 miles in Asia and Europe in 70 days, a total of 12,116 miles in 112 days. The Protos covered 2,607 miles in America in 65 days, and 8,280 in Asia and Europe in 65 days, making a total of 10,887 in 130 days. These figures best illustrate the relative merits of the performance.

In speaking of the remarkable contest Schuster said:

"The trip was a most remarkable one from start to finish, but none of the three of us would undertake it again for any consideration," he said. "No one has any idea of the strain under which we labored as we sought to overtake the flying Protos or rushed on to maintain the lead which we had regained. When we stopped for rest our sleep was broken with nightmares of the other car overhauling and passing up or leaving us far behind and we were driven to keep on the road for practically 20 hours out of 24. This, continued for nine weeks, was a terrific strain, but we went through it successfully and can look back on it as an experience of a lifetime.

"When we left San Francisco the Protos was not yet at Ogden, Utah, where, the rough journey across the States having disabled it, it was shipped to Seattle. We had a comfortable lead on the De Dion and Zust, and on that account, after reaching Seattle, we went ahead to Valdez in order to see for ourselves what the conditions were in Alaska. It was decided to abandon the arctic portion of the journey, order coming that the cars should proceed via Vladivostok, through Asia and Europe to Paris.

"Japan was a picnic, with a few scares thrown in when the narrow, flimsy bamboo bridges had to be crossed, and some strenuous calls for the low gear on the mountain passages. Nevertheless, the kindly hospitality of the natives caused forgetfulness of all the difficulties, leaving only the memory of the good time spent in crossing the land of the little brown man.

"The trouble began when Vladivostok was left behind. The roads were not any worse than in America, but when at home we could always count on food and a clean hotel at the end of a journey. In Manchuria and Siberia there was neither, the hotels being bug-ridden hovels that made one glad to sleep on the veranda, in stables, in wagons, on the ground—anywhere, in fact, but under the roof of a house. Food was as bad, the staple article of diet apparently being a coarse black bread, the crust of which could be eaten, but the inside of which was absolutely indigestible. Eggs could be obtained sometimes, tea always, coffee never.

"Rain accompanied us when we left Vladivostok and remained with us for 18 days in succession. At that time we had not taken to the railroad track, but were endeavoring to push along over the soft, boggy country. On the first day we covered 12 miles, the second about the same distance,

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and the third a little less. Before we were many miles out of town we overtook the Protos, stuck in the mud, pulled them out by means of a tow line, and left them.

"After three days' traveling we reached Nikolsk, went on the railroad tracks—although permission had not been accorded



ARRIVAL OF PARADE AT THE CITY HALL

—but when 100 versts further on stripped our bevel gear and had to lie up for repairs. The Protos, coming along slower, received our permit for traveling on the track, and in this way saved itself a long grind through the mud. There were places where traveling on the railroad was good; there were other spots where it was so shaky that I thought my teeth would drop out of my head. The ties were not sunk, but each one raised a considerable distance out of the ground and just wide enough apart for the wheels to drop in between them with a thud and be pulled out again with a jerk. Our first accident happened on a curve where the ties were just sufficiently close together to allow both front and back wheels to drop in together and remain locked. In the fearful wrench which the car received the bevel gear was stripped.

After passing Kharbin, in Manchuria, where we left all the clothes excepting those we stood in, with orders that they should be shipped to Paris, we had some rough traveling, during which we stripped the second speed gear. A spare was telegraphed for, and I went back to Kharbin to get it. It failed to arrive, and I returned to the car to find that in the meantime Miller had put in a couple of stumps to replace the missing teeth. With this makeshift repair we continued, after ordering the spare part to be shipped ahead to Omsk.

"Later our repair broke down, and in order to get the spare part I had to travel 658 versts by relays of teams, a journey that was done in four days by changing teams every 90 versts. There was a reason for the hurry, the Protos then being in our rear, but rapidly drawing up. I wished to get back and make the repair before they caught us, but was not able to do it, the car passing me when I was within but a few miles of the end of the return journey. I reached the car at 1 o'clock in the afternoon; at 4 we were away again.

"At Moscow we were held up for one day by repairs to the clutch shaft, and again, after leaving Berlin, lost some hours along the same repair work.

"When Nijni-Novgorod was reached our difficulties practically ended, for we struck roads that in comparison were so good that we imagined we were on feather beds. We had to pay duty entering Germany, and on leaving the country had to visit three different towns before the amount was returned to us. Ten minutes after we got it we had to hand it out to the Belgian authorities, by whom we were reimbursed on the first request. Finally, entering France on our last day's run from Liege, 1,113 francs had again to be deposited as duty on the car. Getting near Paris we missed the road, and instead of the macadam highway had to travel for a considerable distance over rough granite pave, that cut down our speed considerably. Though there are so many roads to Paris, nobody on the route appeared to know which was the good one. Mein Gott in Himmel! It was certainly a race!"



ACTING MAYOR McGOWAN (AT WHEEL) AND GEORGE SCHUSTER

Subsidizing Automobiles for Army Use.

Subsidies for privately owned automobiles that are kept on a "war footing" compose one of the latest phases of Germany's military enterprise. The German War Office announces that it is prepared to enter into negotiations with manufacturers or private owners for subsidizing their vehicles. To persons with cars answering certain requirements and who pledge themselves to maintain the machines in a condition for military service for a period of at least five years, the following subsidies will be granted: A purchase subsidy for each car, payable upon its definite transfer to the military administration, of $1,000; maintenance subsidies for each car for five years, payable at the end of each year, amounting to about $250; a premium for the use of domestic German petroleum or benzine. The first two clauses refer to cars of 30 horsepower.

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LOWELL PLAYS NEUTRALITY GAME

Secures A. A. A. Sanction for Labor Day Race—Fends Off Possible Enmity of A. C. A. Toward Entrants.

When John O. Heinze, president of the Lowell Automobile Club, visited New York a few days ago, in an attempt to secure entries for the Merrimac Valley road race to be held Labor Day, he found that the metropolitan "racing trust," as its press agents now style the several New York dealers, chiefly importers, whom R. L. Morrell and Tom Moore brought together, is anxious to be on both sides of the fence at the same time. Some members of the "trust" wish to compete under the auspices of the A. A. A., and also to curry favor with the A. C. A. As the Lowell race has been sanctioned by the national governing body, the "trust" members suggested to Mr. Heinze that he apply for a guarantee from the A. C. A. that participating drivers would not be barred from future races, run by the local New York club. This he did and, of course, he promptly received the "guarantee."

Following the A. C. A.'s guarantee, several entries were promised for the Lowell event, and Moore was hired to "help things along."

Preparations are being made for oiling the course properly and the grandstand is in course of construction. The race being over a 10 miles circuit and being limited to twelve contestants, is calculated to produce some excitement from the spectators' standpoint.

How Press Agents Earn Their Hire.

In "officially announcing" that Harry S. Houpt has been elected a member of the contest committee of the Automobile Club of America, Mills & Moore, press agents and race promoters in disguise, who apparently have been engaged by the club, this week let it be known that a "racing trust" is "in their midst," and also disclosed how they hope to prove themselves worthy of their hire and to "influence" public opinion. The information was dispensed by Mills & Moore, each of whom is anti-A. A. A. to the backbone, and each of whom has grievances of his own in the form of the following "press sheet" contributed free of charge to the newspapers:

"The fact that the racing trust which controls the Fiat, Stearns, Thomas, Isotta, Allen-Kingston, Renault, and Panhard have decided not to apply to the American Automobile Association for a sanction for the 24 hours race at Brighton Beach, and that the Lowell Club played both ends against the middle in applying for the consent of the contest committee of the Automobile Club of America has caused much discussion among the promoting clubs.

"As the American Automobile Association will be forced to disqualify all entrants and officials at Brighton Beach it will be hard for promoting clubs to get entries for their events unless they resign from the American Automobile Association.

"It is reported that several clubs are desirous of affiliation with the Automobile Club of America. Although the club must be pre-eminent in foreign matters it neither claims nor desires that it shall have any preponderance in the councils of the affiliated automobile clubs."

A. C. A. Issues a Race Resolution.

Following a meeting of the contest committee of the misnamed Automobile Club of America, of New York, this week, the following resolution was reported as having been adopted:

"Pursuant to the agreement adopted at Dieppe by the International Association of Recognized Automobile Clubs it has been resolved that all participants, including the manufacturer, agent, private owner, driver, and mechanician, taking part in any international race in America not sanctioned by the Automobile Club of America will be disqualified from competition in any future races held in this country and abroad."

The resolution, which is specific in its reference to "international races" only, is, of course, in the nature of a stab at the Vanderbilt cup race, and although all the paid press agents and the reporters who have been furnished with free admission cards to the New York club's bar, writing room and library, are seeking to make a sensation of it, the resolution is chiefly remarkable as showing that the club still holds true to its foreign inclinations and is striving mightily to fulfill its role as Guardian Extraordinary of Europe's Interests in America.

Why "Racing Trust" Changed Its Title.

The Metropolitan Racing Association, which consists of the several New York dealers and importers whom Bob Morrell and Tom Moore brought together, has dropped "Metropolitan" from its title. Action was taken because the dealers feared that their "racing trust," as their press agent styles the little organization, might be confounded with the fake Metropolitan Automobile Association which consisted of Tom Moore and Mr. Thomas Francis Moore, and which curled up and died after the Motor World turned a searchlight in its direction. Moore's shadow, however, still is behind the "racing trust," whose chief object is to stick in its thumb and pull out more of the plums that are supposed to be in the racing pie. The "trust" believes it best can attain its objects by playing the part of "outlaw" and by promoting "outlaw" races. It doesn't think it requires sanctions from any organization and will make its debut as an "outlaw" organization and as a trouble-breeder generally on the occasion of the meet on the Brighton Beach track, September 18-19.

NINETEEN EVENTS ON THIS CARD

Varied Program from Springfield's Climbfest on Wilbraham Hill—The Course Banked at All Curves.

Nineteen events will constitute the program for the Automobile Club of Springfield's hill climbing contest which will be held at Wilbraham, Mass., on Friday, September 11th. The Wilbraham hill course, which contains some bad turns, has been repaired and the curves banked, and while it is rough enough in spots to insure a lively contest, it is claimed to be one of the best hills for this purpose in New England. The course is 5,280 feet in length, with facilities for a rolling start, and consists of a succession of grades varying from 6 to 23 per cent. The total rise for the measured mile is 453.1 feet, averaging 8.5 per cent., the last quarter dropping from 14.5 to 9.1

The events will be divided into three main classes, to be followed by some special trials. The first class is for gasolene cars, arranged according to horsepower; five different events being scheduled to allow for cars between 15 and 75 horsepower. There also will be a price event, conaestants being divided according to list prices, with six events ranging from $850 to $4,000. The third division of the meet will be forgasolene cars under a piston area classification. Four events, the first for cars under 50 square inches; second, for areas between 50 and 65 square inches; third, from 65 to 90 and the fourth for all cars under 90 square inches.

After these events, which are for stock cars exclusively, have been run off, a trial open to all cars of gasolene power and then an open event for gasolene stock cars, a closed contest for members of the Automobile Club of Springfield, any sort of car eligible, and a second trial for the hill, open to all types and any motive power.

Boosting Good Roads in Utah.

Supplementing a letter campaign to all the voters in Utah, on the subject of good roads and the advantages that everybody would gain by helping along the movement, the Salt Lake Automobile Club has placed an order for 10,000 good roads buttons. The face of the button is made in white enamel with a blue border and the words "Boost for Good Roads" in blue around the edge.

Oldfield the Star at Goshen Meet.

Barney Oldfield was the start of a meet held at Elkhart, Ind., when he set up a new though not remarkable record for the track. Oldfield's previous half mile record for the half mile oval was 1:17¼, and on Saturday he brought it down a hair's breadth to 1:17⅗. Later in the afternoon he defeated Charles Soule in the "Red Spider in a two miles race.

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24 HOURS ENDURANCE CONTEST

Bay State Automobile Association Frames Novel Conditions—Run from Boston to Bretton Woods Scheduled.

Boston's big motoring organization the Bay State Automobile Association, has announced a novel 24 hours endurance contest from Boston to Bretton Woods, N. H., on September 23, plans for which have been definitely laid out. The rules framed by the committee in charge, differ to some extent from those followed in the usual style of endurance runs and have been so designed that cars which pull through the run of 375 miles and finish with perfect scores, "will demonstrate their reliability for touring purposes to the satisfaction of any reasonable person."

Contesting cars are to leave Boston at 10 a. m. on September 23, and will be run for 24 hours, not including the time allowed for stops for meals. Motors cannot be stopped without penalization, except at these points, and during the stops no work on cars will be permitted. Changes of drivers will be allowed at controls, if two drivers are designated by the entrant. It is required that observers appointed shall be practical drivers of cars themselves and not "amateurs" lacking knowledge of motors, as was the case with a few of the Glidden Tour observers. The cars will be in two divisions: Class A to include all touring cars, and Class B, the runabouts and roadsters. For every minute or fraction thereof, spent in making adjustments, repairs, or replacements, a penalty of one point will be made. No penalty shall be inflicted for work of any kind done on tires and tire chains, provided the engine is kept running—in case of a steamer, the pilot light may be extinguished while the gasolene supply is being replenished—but the time so spent shall not be deducted from the running time allowed between the various controls. Contestants will be allowed, without penalization, to fill with water, gasolene and lubricant. to turn up grease cups and to oil the machinery, but everything else done on the car aside from the normal operations of starting and of operating, shall involve penalties as above stated. For every minute or fraction thereof during which a motor is stopped, except at Bretton Woods and luncheon points, there will be a penalty of one point. Besides a penalty for replacements on a time basis, there will also be a penalty of a point for each dollar of the catalogue price of the new part. The observers are also expected to make note of other competing cars which may be stopped along the road.

From start to finish every machine must run on a schedule, with penalties for arriving at controls ahead of or behind time. The schedule will allow an average speed between 15 and 16 miles an hour. Cars which lose time at one control cannot make it up going to the next, but must drop back in the line and keep to their scheduled speed.

A suitable certificate will be awarded to each car which finishes with a perfect score. In the event of a single car finishing the run with less penalization than any other car in its class it will be awarded a silver trophy.

A special prize, to be known as the "Observers' award," will be given the operator who, in the opinion of the majority of the observers, makes the most consistent performance, the prize being a gold watch, suitably engraved. Observers will report their choice immediately upon their arrival at the final control.

Success of the Multiple Efficiency Run.

The "multiple efficiency run," recently devised by the Brush Runabout Co., of Detroit, Mich., to introduce the new Model B Brush runabout to the public and to show the car's ability in road work, is being finished this week. Car No. 1, after spending Thursday and Friday of last week in and around New York City, went leisurely to Boston, its final destination, arriving there Monday afternoon. No. 3 got to its destination, Kansas City, a week ago, several days ahead of its schedule. Less time was given to demonstrations during the latter half of the trip than had originally been calculated upon, owing to later arrangements made for it to continue on to Denver, where Mrs. F. A. Trinkle, wife of the Denver agent for the car, will endeavor to drive it up to the top of Pike's Peak.

Cars Nos. 2 and 4, bound for Washington and Minneapolis, respectively, have gone more slowly, owing to a greater number of demonstrations and stops, and the delivery car, No. 5, is nearing Detroit on its homeward trip, after visiting Chicago and Milwaukee and a number of towns in Wisconsin and Illinois. Many of the smaller localities have turned out en masse to welcome the incoming cars with celebrations and entertainments. No very exciting incidents have come to the cars except one slide off an embankment and one case of having the tires slashed by a rowdy in a crowd. The only mechanical trouble reported for all the cars in their journeying has been one defective disc in No. 3's clutch. The interest manifested by the public, particularly in the lesser cities and towns, has justified the company's unique plan of introducing the new model.

Paris to Build Underground Crossings.

Operations are about to be commenced in Paris upon a system of underground crossings at street intersections, the object being to reduce the delays and dangers to traffic and pedestrians incident to the congestion of the crowded sections. The first tunnel is to be installed under the Avenue des Champs Elysees, and the second at the Gare Saint Lazare.

PHILADELPHIA PLANS BIG RACE

Two Hundred Miles Contest for Founders' Day—Permission Given for Use of Fairmount Park Roads.

Philadelphia is to have a 200 miles road race on or about October 7, under the auspices of the Quaker City Motor Club. The meet is to be engineered by the firm of "Jay Kay—Mills & More—Tom; Publicity and Promoting," which is the correct manner of writing this concern's name. Fairmount Park, through which a ten-mile course is to be laid out, will be the scene of the contest and according to the originators of the scheme, the event is designed to "rival of the Vanderbile cup race," which event Messrs. Miller and Moore are using their best efforts to belittle.

The use of the roads has been requested for daily practice one week before the race, from daylight until 7:30 a. m.

In order to dodge unpleasant friction with either the A. A. A. or the A. C. A., the Quaker City Motor Club has decided to "straddle" and will request a sanction from both the American Automobile Association and the Automobile Club of America. At present there is some question in the minds of the Philadelphians as to whether the three A's will be willing to grant a sanction, for this race, in view of the Vanderbilt contest being so near that date. Should there be a refusal, it is rumored that the promoters will go ahead and attempt to hold the Fairmount Park event as an outlaw meet under A. C. A. sanction, in which case there will be some merry trouble in securing entries.

When the Quaker City Motor Club took up the scheme of holding a road race during Founders' Week, application for a course in Fairmount Park was presented to the Park Commissioners. It seemed a bold move, but aided by Mayor Reyburn and others, the club obtained the desired permission.

The route selected covers ten miles of the finest roads, varying from 40 to 80 feet in width. It is planned to cover this course 20 times. The high bluffs on the river front make a fine natural grandstand, while for those who prefer to watch a score board, a grandstand with a seating capacity of 10,000 will be provided.

Automobile Transport Corps for Army.

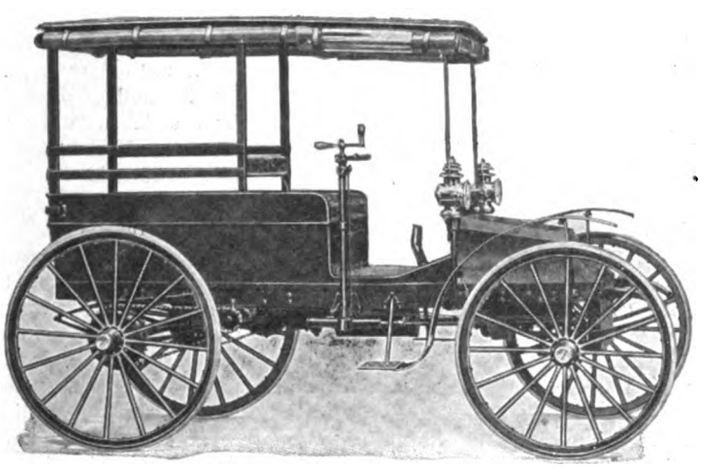
After extensive experiments lasting for nearly two years Germany has decided that automobiles may be made to render important service in connection with the army. The budget commission of the German government has decided to report favorably on a bill to authorize a fund of about $500,000 to provide for the organization of an automobile transport corps to be incorporated in the army.

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MOTOR DELIVERY ON HIGH WHEELS

Details of Latest Reliable-Dayton—Water-Cooled Motor and Sliding Gear Among Its Noteworthy Features.

Because of the growing strength of the demand for high-wheeled motor buggies, the Reliable-Dayton Motor Car Co., Chicago, Ill., has undertaken the construction and introduction of a high-wheeled delivery wagon, following in principles of design the other vehicles already produced but differing from them in one or two material points. The vehicle in question, which is known as the type "J," has a net load-carrying capacity of 750 pounds, or that of the ordinary horse-drawn delivery. With its 20 horsepower motor, however, its radius is increased to such an extent, that it may be expected to displace from two to three such vehicles without difficulty, carrying out exactly the same service.



The motor is of double-opposed pattern, hung across the frame in front and covered by a removable hood, as in ordinary motor vehicle practice. The cylinders are 5⅛ by 5 inches, bore and stroke and are water cooled. The valves, which are of unusually large size, are mounted with the cam shaft, on the upper side of the motor. The fly wheel is constructed with fan blades to increase the draught through the radiator which is mounted in front and below the level of the hood. Jump spark and battery ignition—both battery and coil being mounted in a single casing on the dash board—positive feed mechanical lubrication, concentric float feed carburetter and geared water pump complete the engine auxiliaries.

The master clutch is of the contracting band type, the same as is used on the passenger vehicles constructed under the same name, is operated by foot pedal, as in pleasure car practice, and is lined with the popular camel's hair friction material. The change gear group is mounted in a unit housing which also includes the differential gearing and a complete housing for the countershaft which reaches to the side frame members, where two points of support for the system are obtained. The gearing itself is of the progressive sliding gear type, mounted on Hyatt roller and ball bearings and affording two forward speeds and the reverse, with direct drive on the higher gear. Final transmission is by outside chains to each of the rear wheels.

The mechanism of control consists of two pedals, one of which actuates each of the two sets of internal expanding brakes, which are mounted on the rear wheels, and a third for releasing the master clutch. The steering control and motor regulating devices are mounted on a control pillar erected at the right side of the driver's seat, the steering gear being actuated through a T-bar side lever, and rack and pinion connections.

Unusually large wheels are employed, the front pair being 40 inches in diameter, and the drivers, 44 inches in diameter. Both sets are shod with 1¾-inch solid tires. The wheel base is 92 inches, the tread, 56 inches, or 60 inches, according to the option of the purchaser. Semi-elliptical springs are employed in front, and full elliptics in the rear, the lengths of the two sets being 36 inches. The body floor area is something over 10 square feet, the width at the bottom being 35 inches, and at the top of the side panels, 46 inches; while the distance from the back of the seat to the tail gate is 44 inches. The total vehicle weight is 1,850 pounds, and the guaranteed load capacity, 750 pounds. In this connection the makers are at some pains to explain that the vehicle is not suitable for trucking purposes, being designed solely for light delivery duty. On that account its strength and speed ratio are figured on a very different basis from what would be the case were heavier duty contemplated.

The form of the ordinary road wagon gives a considerable advantage to the salesman. The class for whom such vehicles are intended are averse to the mechanical problem offered by the full-fledged car.

ORIGIN OF THE PLANETARY GEAR

Principles of James Watt's Invention in Modern Application—Method by Which It is Operated.

It is a curious circumstance that despite the generality of its use, comparatively few motorists thoroughly understand the method of operation of the so-called planetary gear. As a matter of fact, however, it is one of the simplest forms of power transmission imaginable as well as a very old one. Probably it is not commonly known that the inventor of the planetary gear was the inventor of the steam engine, or at least, the one to whom its invention is usually ascribed. As a matter of fact, James Watt, in the famous group of patents taken out during the interval 1781-1785, and covering many of the principles still employed in steam engineering, also protected the invention of the sun-and-planet system of gearing.

Primarily this arrangement comprises merely a central gear mounted on the driving shaft in mesh with a second gear which is carried by an arm loosely mounted in line with the main shaft so that it may swing around it like a crank. A third, and internal gear is mounted on a second shaft in the same axial line, and is of such a diameter as to mesh with the second or planet gear. Three combinations of motion are obtainable with such a system. By clamping all three gears so that they cannot revolve with relation to one another, the system turns as a single part, affording what is known in automobile parlence as the high gear. If the arm carrying the planet gear revolves, the outer or annular gear is made to turn in the opposite direction to the main shaft, and at a slower rate of speed, the planet acting merely as an idler to change the direction of motion. If the annular or internal gear is held fast and the main shaft revolved once more, the planet is made to revolve by the central gear, but as the internal gear with which it is in mesh will not permit it to rotate freely, it is made to travel around inside it exactly as a wheel rolls along a track, the result being that the arm which carries it is turned in the same direction as the main shaft, but at a slower rate of speed.

This principle is employed without change in nearly all forms of planetary transmission, the high, low and reverse speeds being obtained by applying brakes to the planet carriers, the internal gears or the entire group as the case may be. Two or three sets of pinions are commonly employed for greater strength, but the principle is unchanged. In the so-called spur-planetary gears, the internal gear is eliminated while the planet pinion is made to drive a second pinion, on its own shaft, which meshes with a fourth gear on the driven shaft.

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RELEASE FOR EMERGENCY CLUTCH

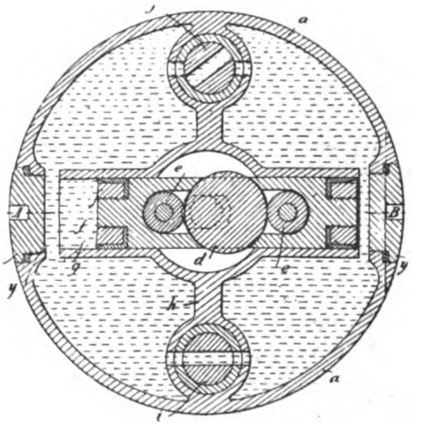
Double Control Provided for in New Hydraulic Device—Novelty Shown in Method of Construction.

Although it seldom happens that the ordinary types of master clutch in common use are the cause of serious trouble as a result of becoming permanently engaged, this possibility always exists in the mind of the novice, and further, may be realized in the event of failure of any of the connecting linkage between the clutch and the controling pedal. The idea of providing an extra emergency release entirely independent of the regular means of actuating the clutch would be particularly welcome to a certain class of drivers on this account. With either the cone or multiple disc types of clutch, it is not readily to be contrived. In the Smith hydraulic clutch, which is a British product, distinct provision is made with this end in view. In addition to this, the clutch in question presents one or two rather novel features, which are worthy of attention.

The principle employed is the favorite one with designers of hydraulic clutches in general, namely that of the plunger pump. Two pump cylinders are provided enclosing pistons which are actuated by means of a common eccentric from the driving shaft of the transmission. The inner chamber of the fly wheel in which the mechanism is enclosed, is divided into two compartments communication between them being by means of a couple of openings which are regulated by suitable valves. One of the latter is under direct control of the operator and serves the ordinary purposes of engagement and disengagement, thus furnishing the full control of the vehicle. The other is designed to be used entirely as an emergency cutout, and to be opened by pressing a special emergency lever when the regular mechanism is disarranged, or when, for any other reason, it cannot be used.

The detail construction of the device is illustrated in the accompanying sectional view which is taken at right angles to the axis of the propeller shaft. The hollow fly wheel, a, is positively attached to the crank shaft of the engine, and is internally connected with the transmission shaft by means of the plain eccentric, d, which is operated by the pistons, f, carrying antifriction rollers, e-e, at the contact points. The cylinders, g, are formed in the body of the fly wheel, while the annular chamber formed within the remainder of the enclosure is divided into two sections by means of the partition, h, in which are mounted the two rotary valves, i-j, on opposite sides of the crank shaft.

The interior of the casing being filled with a liquid, the motion of the pistons, when the fly wheel revolves and the transmission shaft is at rest, causes a constant flow of the liquid back and forth through one of the valves, i-j. As already stated, one of these valves may be held closed under ordinary circumstances, but may be opened on emergency, while the other is employed to control the motion of the driven portion of the device. As the controlling valve which may be either of the two, is closed, the resistance to the flow of the liquid is increased in proportion to the reduction in area of the opening in the valve. The effect of this is to reduce the motion of the pump plungers or pistons, simultaneously causing a corresponding motion in the transmission shaft. As the valve opening is reduced this is increased until the valve



is entirely closed, when the circulation of the liquid ceases completely and the entire clutch revolves as a unit—subject only to possible slippage of the pump plungers due to leakage. The device is assembled by means of the plugs, y-y, which give access to the interior of the fly wheel and provide means for the ready removal of the plungers.

Connecting Carburetter and Intake.

When connecting the carburetter to the intake manifold of the engine it should not be necessary to "drift" the bolt holes in the flanges of the couplings in order to bring them into line. If the piping is in good order it should go into place without difficulty. If it does not, it is usually the case that the difficulty may be rectified by altering the position of the carburetter on its bracket. Bringing the parts into line by main force and awkwardness is very apt to strain the joints in the piping and cause leaks.

Little Clips that Should be Tight.

The little clips which are frequently mounted on the outer ends of the long leaves of semi-elliptical springs should be kept drawn up tight and firmly secured at all times. Their purpose is to prevent the leaves from being disaligned and to act as a shock absorber by bringing the outer leaves into action on the rebound, as well as by increasing the friction between the leaves.

REPLACING A CLUTCH LEATHER

Difficulties Encountered in the Operation and How They May be Overcome—Making a Pattern for the Blank.

Drivers who have had occasion to replace a leather facing on a plain cone clutch in nearly all cases have had a more or less unpleasant experience unless they have been instructed as to the proper way of going about it. The cutting and marking off of the rivet holes in the leather are bothersome enough in themselves, but unless they are carefully performed they are not a circumstance to the difficulties which are apt to follow when it is attempted to put the clutch into service. With careful treatment, however, it is possible to secure very good results even without previous experience.

The leather selected for the purpose must be clear, straight grained and of absolutely even thickness. These requirements are absolute. In cutting the blank, it is best to scribe a paper pattern first by laying the clutch disc on the floor or bench upon a large sheet of paper and rolling it carefully along without slipping. marking its path with a pencil until one complete revolution has been made. The leather may then be cut with this pattern, a rather liberal allowance being made for possible inaccuracies.

In applying the leather to the cone it is necessary to stretch it perfectly even and without wrinkling. Further, if it is not started perfectly straight—that is, with its sides parallel to the sides of the cone—it will not run true, but will have to be stretched unevenly to prevent it from working off at one side. On this account it is best to secure it at not more than six or seven points around the circumference, stretching it evenly and choosing points which will not cause it to pucker. Afterward the remaining holes may be easily and quickly put through with a small drill, using the cone as a jig.

The rivets must be headed over carefully so as not to bend them, as in that case the tendency would be to draw the leather. Also they must be driven low enough so that they cannot touch the seating in the fly wheel, thereby causing slipping. After the leather is entirely secured in place, it must be gone over carefully with a sharp rasp or a very coarse file, the edges being slightly beveled and any roughnesses in the vicinity of the rivets taken down, so as to leave the surface perfectly smooth. As a final test of accuracy, the clutch may be assembled and the seating in the fly wheel coated with chalk. When the cone is let into place, the chalk will at once indicate any "high spots." These may be removed with the file, after which the process may be repeated until a perfectly even contact is secured all the way perfectly even contact is secured.

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THE HORSEPOWER OF THE HORSE

Churchward Compiles Some Useful Data on the Subject—Where Motor Traction Gains Its Advantage.

Commercial vehicle salesmen constantly are called upon to furnish comparative estimates of the costs of animal and mechanical traction. Generally speaking, it develops in this connection that instead of falling back upon the absolute unit of cost per ton mile of service they are forced to deal with the purely relative and more or less unsatisfactory and misleading statement that the motor vehicle if properly operated may be expected to displace three two-horse teams in the transportation of a given volume of merchandise. For it is a curious fact that even those who are most familiar with the use of horses seldom have accurate knowledge of the costs of horse service in terms of actual paying load hauled and miles covered. Animal transportation, in fact, despite its antiquity is one of the most loosely conducted of modern business undertakings.

For this reason a compilation made by Alex. Churchward, the New York engineer, in connection with his study of motor vehicle work is of particular value. The matter forms a useful addition to the studies of tractive effort and the performance of electric vehicles which already have appeared in these colums from the same source.

That the horsepower of the horse is not the same as the horsepower unit of commercial application is generally conceded. Indeed, there is a tradition to the effect that James Watt, to whom is ascribed the credit of first setting up the contention, purposely set the value of the nominal horsepower at about 50 per cent. above the average output of the normal horse with the laudable intention of increasing the demand for his engine. However that may be it is a fact that few investigators have succeeded in finding horses which could perform the required 33,000 foot pounds of work per minute, and continue to do so except for very brief intervals of time.

According to Rennie, the average work of horses, is 22,000 foot pounds per minute, or two-thirds of the nominal amount of the standard unit. Haswell, however, is authority for the statement that the greatest mechanical effort of an ordinary horse when traveling at 2½ miles per hour is equal to a tractive force of 150 pounds, exerted for 8 hours per day. This reduces to the average rate of 33,000 foot pounds per minute. The more satisfactory method of rating by means of ton miles of duty gives results from which the cost of such service may be computed directly.

From a French experimenter comes the statement that with average conditions of macadam and asphalt, the normal horse can draw at the rate of 2.13 ton miles per hour in winter, and 2.7 ton miles per hour in summer. The average results obtained with the famous Flemish horses of the north of France are 21.82 ton miles per day in winter, and 27.82 ton miles per day in summer, the discrepancy between the results obtainable in the two instances being due to the increased difficulty experienced by the animal in obtaining a good footing on bad roads, perhaps quite as much as on the additional tractive effort required to draw the load over soft ground. From the results of exhaustive tests made at Bedford, England, it was determined that a good horse can draw 1 ton at an average rate of speed of 2½ miles per hour for 10 to 12 hours per day.

When it is attempted to increase the rate at which the work is done, the effect upon the animals, and so the expense is found to increase at an astonishingly rapid rate. Thus, if the cost of transporting one ton of merchandise at the rate of 3 miles per hour be considered 1, it has been proved that at 4.30 miles per hour it is 2, or just double the cost for hauling the same load at about two-thirds the speed.

Another way of considering the same principle is by comparing the possible work of horses in hauling loads both on rails and on hard macadam, at varying rates of speed and for the different lengths of time during which the required amount of effort may be sustained. Results obtained in this way show that the amount of load carried is roughly in inverse proportion to the speed, that is to say that only half as much load can be carried at a given speed as could be carried were the speed only half as great. The accompanying table gives a complete comparison arranged on this basis.

Speed in miles per hour.	Duration of work hours.	On rails, tons.	Macadam, hard, tons.
3.5	11.5	115	14
3	8	92	12
4	4.5	72	9
5	2.9	57	7.2
6	2	48	6
7	1.5	41	5.1
8	1.125	36	4.5
10	.75	28.8	3.6

Coming directly to the tractive effort exerted by the horse, from which an absolute comparison with the work of the motor vehicle may be obtained, it has been found to vary from 300 pounds and over down to 40 pounds, the amount varying with the speed and the length of time during which the effort is exerted. In the following table, two sets of results are compared, one being for efforts exerted at the speeds named for periods of ten hours, or during the whole of a regular working day, and the other, which is credited to Molesworth, for periods of ordinary and short duration. For the sake of comparison they are placed side by side as also casting some light on the probable decrease in the power of the horse when his work is spread over a period of several hours, or to put it another way, as showing the power gained where frequent rest periods are injected into the working period.

Miles per hour.	Tractive effort for 10 hours per day.	Tractive effort for short periods (Molesworth).
.75	330	...
1	250	....
1.5	165	...
2	125	166
2.5	100	...
3	82	125
3.5	70	104
4	62	83
4.5	...	62
5	...	41

The average tractive effort of the commercial motor vehicle is, according to Mr. Churchward's own determinations, somewhere between 25 and 40 pounds per ton on good city streets. For every 1 per cent. grade, 20 pounds per ton must be added to this amount. Comparison between the tractive efforts required on roads of various sorts shows an astonishing increase in the power required for propulsion, which, of course, is the same for a given load, regardless of the source from which the power is derived. Where for asphalt, it may be taken as ranging from 25 to 30 pounds per ton, on macadam roads it ranges from 35 to 60 pounds, and on common earth roads, from 50 to 200 pounds per ton. These considerations are seldom applied to animal traction service, since it is customary to expect the driver to get what work he can out of the horses, and to ignore the effect of highway conditions as having a direct influence upon the life and performance of the animal.

Another factor which is commonly ignored in considering the cost of animal traction, but which is shown by the study of the motor vehicle to be of considerable importance in this connection, is the effect of a number of stops upon the total power output required to transport a given load. Thus, in a previous article from the same source, it was shown that 10 stops per mile increase the necessary tractive effort by 28 per cent. Similarly, 5 stops per mile were shown to increase it no less than 16 per cent. Hence, in animal traction service where frequent stops are required, as for instance the delivery work, it is plain to see that the power output of the beast must be increased in the same proportion, so that increasing the number of stops is roughly equivalent to increasing the mileage.

Though no direct figures are obtainable in this connection as showing the effect of stops and road surface upon horses, a rough indication that the effect is of marked importance is given in statistics of the average useful life of animals under different conditions of service. Thus, the average life of horses hauling a heavy 3-ton truck at an average speed of 2½ miles per hour and from 10 to 15 miles per day, is 7 years. The average horse attached to a delivery wagon making from 12 to 15 miles per day at an average speed of 5 miles per hour lives but 3 or 4 years, before he must be retired.

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FACTORY TESTS OF HILL CLIMBING

Jeffery Installs Device Accurately Showing Rambler Capability at Various Grades —Practical Stunts on Inclines.

Mental estimates of hills and grades are much like estimates of speeds, or of the weight of fish that got away, and it is rare indeed that any hill that presents an appearance of steepness begins to equal in cold fact the guesses that are usually made as to its grade. While it is pleasing to the owner of a car to place a very high estimate on the character of some grade which he has triumphantly surmounted, the more sober demands of testing service require that the manufacturer know accurately just what his cars can actually do in this line.

One of the most complete devices to determine the hill climbing powers of automobiles has been installed at Kenosha, Wis., for the use of Thomas B. Jeffery & Co., in connection with the testing system for Rambler cars. As shown by the illustration, it consists of an incline platform and runway. The platform is 25 feet high, and each car, before it leaves the factory, is required to perform a series of hill climbing "stunts" that will prove its ability to do all and more than will be required of it in touring use in the hands of a private owner. After that is being tested is run slowly up the first portion of the incline, which represents a 20 per cent. grade, and then proceeds a little more rapidly up the 30 per cent. grade until it reaches the 40 per cent. section. There the car is stopped and started again on the low gear. Each car is required to climb the full grade on all gears before it passes inspection.

Almost needless to say, the grades are not mere estimates, but were mathematically laid out when the platform was designed. In this way all guess work as to the hill climbing abilities of the machines has been eliminated, and while the runway does not present the picturesque features of many apparently very steep mountain roads, it gives an assurance of fact as to grades, which is valuable to both manufacturer and purchaser alike.



TESTING THE HILL CLIMBING CAPABILTY OF THE RAMBLER

Keep the Fan Adjustments in Order.

If the adjusting device on the fan driving belt is permitted to become disordered in such a way as to render its adjustment insecure, it should be corrected at once, as otherwise there is danger that it may cause the belt to become slack when on the road —a difficulty which will not manifest itself until hill-climbing is encountered, when it may be responsible for serious overheating.

EKING OUT A SCANT FUEL SUPPLY

How a Motorist Made Pebbles Serve His Need—But the Clever Trick Had a Troublesome Sequel.

Being in sore straits as a result of the low supply of fuel in his gasolene tank, an ingenious motorist is reported to have resorted to the simple expedient of dropping small pebbles into the tank, one at a time in order to raise the level of the fuel above that of the outlet pipe, thereby ensuring for himself a very small additional quantity of the needful to carry him to the nearest point where a new supply could be obtained. The device was not without its unhappy after effects, however. For setting aside the clogging effect of the dirt which washed from the stones, it was found to be impossible to remove the pebbles from the tank, even when the tank was taken from the car and shaken upside down. Ultimately it became necessary to take it apart in order to clean it. The incident serves as a good illustration of the need of taking second thought before applying a remedy which results from roadside inspiration, resulting possibly from dim memory of an old fable about the bird that secured a drink by a similar expedient.

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SHORT MEASURE ON A SPEED TRAP

How Automobilists Have Been Shaken Down on One Jersey Road—Surprising Results of an Investigation.

Maybe speed traps are desirable as conducing to a more careful observance of law on the part of motorists than would be given were there no such aids to the rural constable and country magistrate. But the bedrock principle upon which any such desirability can be established is that of honesty in their measurement and operation. This appears to be lacking in the case of one or two traps operated between Metuchen and New Brunswick, N. J., and investigation by the legal committee of the New Jersey Automobile Club tends to show that many convictions obtained in the court of Justice of the Peace William H. Housell have been unjust.

On two different days Joseph H. Wood, acting chairman of the committee, accompanied by members of the club and a newspaper representative, went to Highland Park, near which the traps are situated, and inspected closely not only the traps themselves, but the manner in which they were operated. The result was a series of signed statements which Mr. Wood now has in his possession.

The first expedition was made on Sunday, 2d inst. After some search the two traps were found on the main road between Metuchen and New Brunswick, near Highland Park. One trap is operated so as to time vehicles going to New Brunswick, and the other to catch machines running in the opposite direction. A visit was paid to Justice Housell, who holds court in a small white frame house on the western side of the road, and a request was made of the constable to indicate the limits of the two traps. He demurred at first, but at the suggestion of the justice that he comply, accompanied the motorists on the car.

The machine which Mr. Wood drove was equipped with a combined speedometer and trip mileage register, indicating to tenths of a mile. After Constable Mundy had indicated the limits of the traps the car was sent slowly over them and the register carefully watched. On the trap to the north of the justice's place of holding court the distance recorded was correct for the quarter of a mile claimed, but on the trap nearer to New Brunswick was less than the distance was indicated.

After carefully noting the ends of the trap, as pointed out by the constable, the party was about to depart, when a boy was seen signaling with a handkerchief from a clump of bushes many yards in ide the trap. Upon being questioned, he said that he was supposed to wave the handkerchief as a car passed him, as a signal for the man at the other end of the trap to start his stop watch when the automobile passed him at the other extremity of the trap, and if the elapsed time was 35 seconds or less, the second man gave a signal to Constable Mundy, stationed still further down the road, to stop the machine and take the driver before Justice Housell.

The actions of the boy with the handkerchief were carefully watched. It was seen that as several cars went by he waved the handkerchief exactly as the machines passed him, but in at least one instance he waited until the automobile had reached a point several yards beyond him, that is, further into the trap. Both the position of the boy and of the car in the latter instance were noted, and then the party returned to Newark.

On Monday afternoon, 10th inst., another trip was made to the two traps, one of which was found to be in full operation, a motorist being on trial before Justice Housell at the time the investigators arrived. On this day, Mr. Wood had with him not only the witnesses of the previous Sunday, but a surveyor equipped with standard steel tapes. The engineer made a careful measurement of the traps, after the points of location had been found as laid out the Sunday before.

The measurements showed that the trap to the south of the justice's headquarters is four feet short of the 1,320 feet for the quarter mile claimed. The position which the boy with the handkerchief had taken on the Sunday the investigation was made was found to be 106 feet from the end of the trap as pointed out by Constable Mundy, and the position of the car which had been wigwagged after passing the boy was found to be 108 feet still nearer the other end of the trap. This clipped 218 feet off the 1,320 which the course was claimed to be. In at least one case, then, a car had been timed for 1,102 feet instead of the full quarter of a mile.

This difference is sufficient to cause an apparent increase of speed of five miles an hour over the actual speed. For instance, if a car were traveling at such a rate that it made the 1,102 feet in 30 seconds, it would actually be traveling 25 miles an hour. This is a speed at which Justice Housell asserts he has never convicted a motorist, holding that a margin of five miles per hour above the limit of the law should be allowed for errors. According to the computation for a full quarter of a mile, however, the machine was making 30 miles an hour, and its driver would certainly be convicted.

Moreover, according to the voluntary statement of Constable Mundy, motorists are fined if they cover the distance of the trap in 35 seconds or less. Figuring on the speed for 1,102 feet at 35 seconds, gives only 21 miles an hour, an excess over the limit of 20 allowed by the law, which no judge would recognize. How many motorists have been fined through the "mistake" in measurement cannot be determined.

LOWERING THE "BISCUIT RECORD"

Grain Harvested, Ground, Made into Bread and Eaten within 22 Minutes—How an Automobile Assisted.

Waitsburg, away out in Washington, is proud! It has placed the "biscuit record" to its credit and owns up that the automobile made it possible. The story of the glorious achievement is thus heralded by a Washington correspondent:

"Dale H. Preston, driving a 30 horsepower Corbin automobile, sent over a quarter mile stubble field and 1¼ miles of country road at a 70-miles-an-hour clip, was the chief factor in lowering the world's record in producing biscuits made with flour from the plump heads of grain which nodded in the morning sun 22 minutes before. The feat was performed at Waitsburg, Wash., south of Spokane, the grain being grown on a hillside farm owned by N. B. Atkinson, president of the Washington State Farmers' Educational and Co-operative Union, two miles from town, and the test was witnessed by R. M. Breeze, mayor, and 50 residents.

"The various stages of the operation and time announced by R. H. Ormsbee, formerly prosecuting attorney of Walla Walla county; E. L. Wheeler, editor of the Waitsburg Times, and Platt B. Morrow, general merchant, official time keepers, follow:

9:03—Ripe wheat standing in the field.

9:04—First head clipped from the straw by the heading machine.

9:08—Grain started into the cylinder of the threshing machine.

9:11—Four sacks threshed, sacked and sewed and loaded onto automobile.

9:14—Grain received at mill, two miles from field, weighed and dropped into the receiving hopper; four sacks weighed 535 pounds.

9:19—First flour appeared at packer, having traveled 640 feet in the machinery. A. Beck, baker, began mixing flour, baking powder and water into dough.

9:21—Molded dough in pans placed into oven.

9:23—Two sacks of flour ground, sacked and sewed, ready for market.

9:26—Biscuits taken from the oven, buttered and distributed among witnesses.

"With the exception of the automobiles employed to carry the grain and the time keepers and the pressing into service of a gasolene oven, the process of harvesting and manufacturing was regular, the cutting and threshing being done by an ordinary crew, which had operated the machines in the field two weeks."

The broad asphalt pavements of Washington are to be sprinkled by automobile water wagons. No demands have been made by Washington's floating population that passenger arrangements be provided.

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SUPPLEMENTARY SPIRAL SPRINGS



¶ If every driver had to ride in his own tonneau, every car would be quickly equipped with Supplementary Spiral Springs. Owners are not intentionally selfish—many of them just thoughtless. Usually driving or sitting beside the driver, the riding qualities of the tonneau are to them practically unknown.

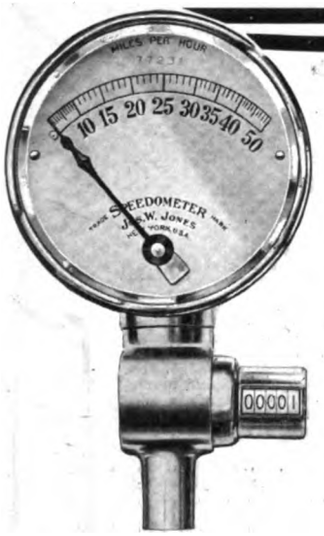
¶ Not so with the passengers. Rear springs must be strong enough to resist severe shocks under a full load. That means stiff springs under ordinary loads, with the shocks and jars transmitted to the passengers—guests whose comfort ought to be a first consideration.

¶ **SUPPLEMENTARY SPIRAL SPRINGS** take up all the average bumps and road inequalities and come into real action with the jolts and jars encountered at speed.

¶ With the S. S. S., your springs never whip or touch. They prevent breakage and are the most economical and useful accessory ever provided for a car. Every live dealer carries them and their attachment is a matter of a few hours' time. Do it NOW.

SUPPLEMENTARY SPIRAL SPRING CO.

Motor Mart, New York — 4555 Delmar Ave., St. Louis, Mo.



THE BEST Speed Indicator in the World for $25

JONES SPEEDOMETER

The Jones at $25 actually excels in accuracy and efficiency, instruments sold by other manufacturers for $40 and $75. This instrument has 3-inch porcelain dial, 50-mile speed scale, 10,000-mile Veeder Odometer register. Same driving mechanism as Jones Standard instruments.

The Jones with the exclusive Maximum Speed Hand, and Instantaneous Reset Odometer is beyond competition. It is the acknowledged Standard speed indicator of the world.

Out of 46 contesting cars for Glidden and Hower Trophys and Glidden Certificates, 33 cars were equipped with Jones. 4 out of 5 Official cars also carried Jones.

Write for "The Speedometer," a magazine devoted to speed subjects, and the Special Speed Issue of "The Evening Bulletin" of particular interest to all motorists.

JONES SPEEDOMETER, 76th St. and Broadway New York

BOSTON 109 Massachusetts Ave. — CHICAGO 1421 Michigan Ave. — DETROIT 247 Jefferson Ave.
PHILADELPHIA 259 No. Broad St. — CLEVELAND 1841 Euclid Ave.

TO DEALERS AND AGENTS

¶ Have you given thought to the manifold, unusual, good qualities of the

Gyroscope Car

¶ The merits of the car are so pronounced that we have contracted for the ENTIRE OUTPUT of the Detroit factory for FIVE YEARS.

¶ At $750, equipped, the Gyroscope Runabout, or at $800, the Tourabout or Touring car, is by far the best selling proposition of the times.

¶ Its freedom from cranking, its absence of transmission annoyances, its anti-skid feature (due to the gyroscopic action of the horizontal fly-wheel), its low cost of maintenance, elimination of vibration, and the impossibility of turning over on short curves at high speed, and its minimum wear on tires, combine to make the GYROSCOPE Car the safest, simplest and most economical car ever put on the market.

¶ We are signig contracts daily for territory allotments on better terms than other companies can afford to offer. There are no conditions (such, for instance, as making you sell higher-priced cars to get your small ones). By November 1, we shall have closed for our 1909 output.

GYROSCOPE AUTOMOBILE COMPANY (INC.)

GYROSCOPE BUILDING

231 West 54th Street

NEW YORK CITY

Telephones—4954 and 4955 Columbus.

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SOLARCLIPSE LAMPS

THE WONDERFUL SOLARCLIPSE LAMP

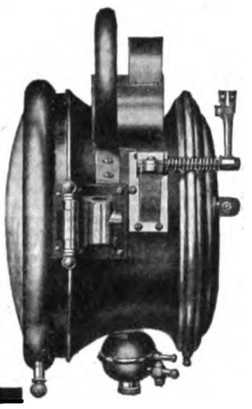
throws two distinct rays: one powerful long distance field of light—and one short distance. The first is thrown over one thousand feet ahead—the second directly in front of the motor car.

It is generally admitted that the blinding glare from a Headlight or "Search" impairs the usefulness of the lamp, when city driving is necessary.

The Automatic Self-Eclipsing Mechanism

makes it possible to suppress the long distance ray at will—this leaves the road immediately before the car brilliantly illuminated. Solarclipse Lamps completely solve the acetylene head light problem.

Complete description of this wonderful lamp in our 1908 catalog, sent free upon request.



BADGER BRASS MFG. COMPANY
606 Lyman Avenue, KENOSHA, WIS

Matheson

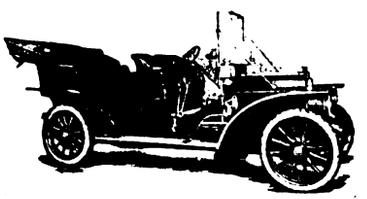
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Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.

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ROCHESTER, N. Y.....Rochester Automobile Company.
GENEVA, N. Y.....D. M. Dorman.
AMSTERDAM, N. Y.....William Daye.
HAVERSTRAW, N. Y.....M. A. Driscoll.
PHILADELPHIA, PA.....Matheson Co. Branch, Broad & Green Sts.
PITTSBURG, PA.....Matheson Agency, 41 Leader Bldg.
WILLIAMSPORT, PA.....Rothfus-Howard Iron Works.
BOSTON, MASS.....Matheson Co. of Boston, Cambridge, Mass.
CHICAGO, ILL.....Bird-Skyes Company, 147 Michigan Ave.
BALTIMORE, MD.....Matheson Co. of Maryland, 1002 Morton St.
ST. LOUIS, MO.....South Side Auto Co., 2339 S. Grand Ave.
FORT WAYNE, IND.....Strauss Bros. & Company.
PORTLAND, OREGON.....H. L. Keats Auto Co., 80-82 Seventh St.
LONG BRANCH, N. J.....Long Branch Auto Co.
COVINGTON, KY.....J. S. Stevens.
TACOMA, WASH.....Puget Sound Iron & Steel Works.
SAN FRANCISCO, CAL.....Matheson Co. of Cal., 605 Van Ness Ave.

Dealers are wanted in all localities where we are not now represented.



Touring Car $5,500, seats seven; Roadster, $5,000, seats five; Rakish Steering Post, Demountable Tonneau.

Tourabout, $5,000, seats four; Rakish Steering Post; Demountable Rear Seats.

MATHESON MOTOR CAR CO., Makers,
Wilkes-Barre, Pa
Licensed under Selden Patent.



WEED CHAINS

Made Perfect Scores Possible in the Glidden Tour

Had it not been for Weed Chains it is doubtful if any of the cars in the Glidden Tour would have completed the 1,669.7 miles run with perfect scores.

Mrs. Cuneo's telegram says: "Used chains three wheels; hardest day's trip 130 miles, over mountains; record time an impossibility without chains." This makes clear that it would not have been possible to travel on the wet, slippery roads without the use of Weeds.

Weed chains when attached to your tires positively prevent skidding. They grip and hold the wheels to the road, and enable the heaviest automobile to climb hills, or negotiate in mud or sand without any trouble. They prevent lost traction, and reduce gasolene consumption. Fit any standard tires; are readily attached and detached.

Write for "THE WEED," a Bulletin.

WEED CHAIN TIRE GRIP COMPANY
35 MOORE STREET, NEW YORK

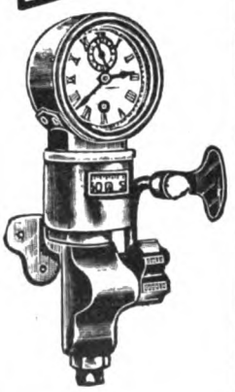
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GUARANTEED FOR ONE YEAR.

"Thirty Days' Free Trial"

When a manufacturer is willing to send his product to anyone, anywhere, for 30 days—with no deposit, no agreement to buy, no promise to do anything except give that product a fair trial—he must have more than ordinary confidence in his article. In order for him to have that confidence he must have a most extraordinary product.

That's what we do. We'll send an Auto-Meter to any automobile owner in the country—with no deposit, no agreement, no promise to do anything but put it on his car and give it a fair trial. It doesn't matter whether he has another make of speed indicator already on the car or not. Indeed, for the sake of comparison, we hope he has. We will abide by the decision—for he will always keep the indicator that tells the truth. We claim for the Auto-Meter that it is the only one of which "the dial never lies." We believe that the instrument itself is the most eloquent salesman we have—we're willing to let it do our talking. Send to-day—just tell us what make and model of car you have—size of tires, etc.,—and we will send you an Auto-Meter.



Is Right
Stays Right
Accurate At All Speeds

WARNER INSTRUMENT CO.
245 WHEELER AVENUE BELOIT, WISCONSIN

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The Week's Patents.

888,906. Cushion Tire. James B. Jordan, Nashville, Tenn. Filed Feb. 25, 1907. Serial No. 259,181.

1. A vehicle tire comprising a hollow, heart shaped resillient core, a cover therefor, combined with means for securing the core and covering to the felly of a wheel, and cloth-covered metallic inserts in the tread of the cover to prevent slipping and skidding of the tire.

888,932. Automobile Sled Attachment. Henry H. Rohlf, New London, Wis., assignor of one-third to Adolph L. Haase, New London, Wis. Filed Sept. 9, 1907. Serial No. 391,985.

1. In combination, a runner, a driver mounted upon the runner, a jack interposed between the driver and runner to effect certical movement of said driver, said jack comprising a cylinder and a plunger, and means for supplying a fluid medium to the cylinder of the jack to effect movement of the driver.

888,933. Traction Wheel. Henry H. Rohlf, New London, Wis., assignor of one-third to Adolph L. Haase, New London, Wis. Filed Sept. 9, 1907. Serial No. 391,986.

In a traction wheel, the combination of a rim comprising a felly and a tire, the same having registering openings, the openings in the tire being internally threaded and the openings in the felly being contracted, cogs, each consisting of a tapered end, a threaded body portion and a stem having its outer end threaded, a shoulder being provided at the base or juncture of the body portion and pointed end, said cogs serving when in position to connect the tire and rim and having their shouldered portions engaged with the tread surface of the tire, their threaded body portions screwed into the threaded opening of the tire and their stems passed through the contracted openings of the felly, and set nuts fitted upon the threaded ends of the stems.

888,965. Automatic Carburetter for Explosive Motors. Louis M. G. Delaunay-Belleville, Paris, France, assignor to Societe Anonyme des Automobiles Delaunay-Belleville, St. Denis, Paris, France, a Corporation of France. Filed Sept. 30,1907. Serial No. 395,205.

1. A carburetter comprising a casing having a tube for the passage of vaporized fuel and primary air, a supplemental air inlet in alignment with said tube, and a conduit extending laterally from said tube, means arranged at the junction of said tube and conduit for deflecting the vaporized fuel and primary air from said tube and the supplemental air from said inlet into said lateral conduit, and a device for controlling in direct proportion the quantities of vaporized fuel and primary air, and the supplemental air admitted to said inlet, into said conduit.

889,069. Pneumatic Tire. Charles E. Titus, Springfield, Mass. Filed June 21, 1907. Serial No. 380,136.

1. A tire reinforcement comprising a plurality of overlapping and interengaging tread members connected to the periphery of the tire and having the central portion of its lower face constituting a fulcrum.

889,181. Transmission Mechanism. Orson W. Davis, Rochester, N. Y., assignor, by direct and mesne assignments, to Gearless Transmission Co., Rochester, N. Y., a Corporation of New York. Filed Oct. 24, 1906. Serial No. 340,354.

1. In a transmission mechanism, the combination of the motor and driven shafts in axial alignment and independently rotatable, of means mounted upon said shafts and rotatable therewith for connecting them to cause them to turn in unison, and frictional transmission members some of which are supported independently of said shafts, and others of which are mounted on said shafts for connecting said shafts indirectly to drive the driven shaft in either direction at a speed different from that of the motor shaft.

889,263. Pneumatic Tire for Vehicle Wheels. Robert P. Scott, Cadiz, Ohio. Filed June 20, 1906. Serial No. 322,552.

1. The combination of a pneumatic tire having an inextensible selvage, a flanged rim carrying an expansible band furnishing an adjustable seat for the selvage, and an annular, expansible and removable side flange, sprung into the space between the band and rim flange to hold the inflated tire in position, substantially as described.

889,334. Armor for Tires. Frank E. Remark, Akron, Ohio. Filed Nov. 21, 1906. Serial No. 344,484.

A chain armor for tires formed of a plurality of rows of links circumferentially disposed with respect to the tire of the wheel, each of the links of said rows of links substantially rectangular in contour and having rounded corners, the end portions of each of said links bent above the plane in which is positioned the intermediate portion, each of the links of each row with the exception of the links of each outer row interlocking with four adjacent links, each of the links of the outer row interlocking with three adjacent links, said links gradually increasing in width and length towards the center of the armor.

The PULLMAN

4-40 Roadser. Price, $3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

YORK MOTOR CAR CO., York, Pa.

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Tourist $1.500 Roadster $1 250

OVERLAND AUTOMOBILE CO.
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15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

HAVE purchased a big car; decided to dispose of my Franklin runabout, '06 Model "E" with full equipment, top and glass front, and my Franklin touring car, '06 "D," 20 H. P., full equipment with extension top. Great bargain to make a quick sale. Address J. F. HITCHCOCK, 21 Plymouth Ave., So., Rochester, N. Y.

FOR SALE—$100 to $500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standards makes from $640 to $1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets of the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

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WILL BE ON MOST CARS IN 1909—WHY? ASK THOSE WHO HAVE TESTED IT

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(The Best Tubes Ever Manufactured)

ONE YEAR'S CONSTANT SERVICE IN THE BOSTON FIRE DEPARTMENT

Dow Tire Co., New York, N. Y. Headquarters Fire Department, City of Boston, Bristol Street. Boston, July 20, 1908.

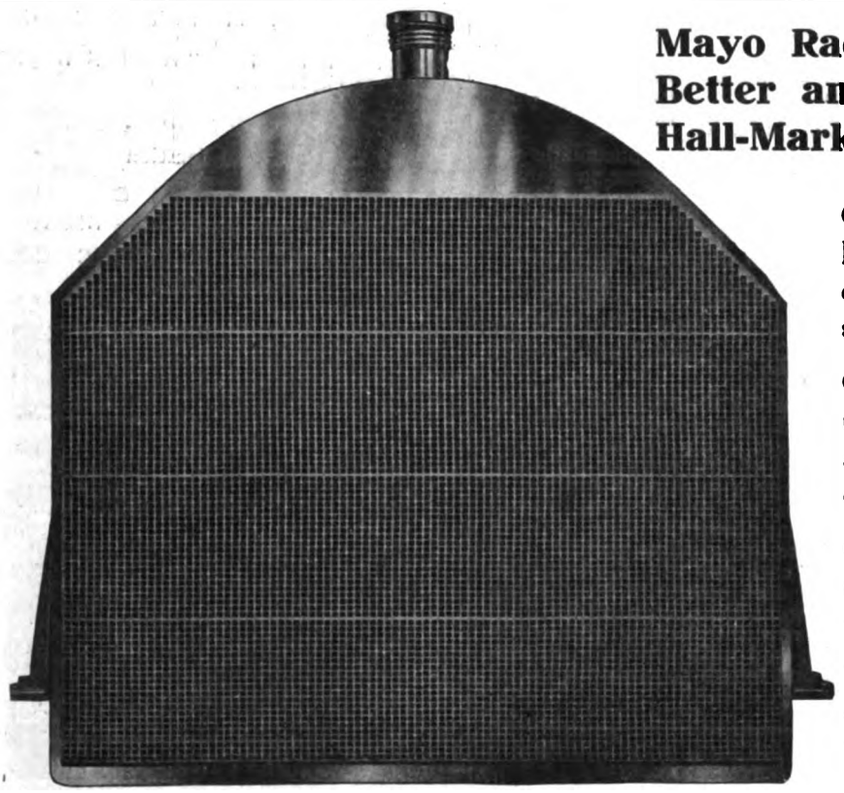
Gentlemen—Having used the Dow Non-Deflation Tubes since August 19, 1907, on the automobile used by Chief Mullen of this city fire department in his response to alarms of fire, I feel that, in return for the excellent results received from these tubes, I ought to inform you of same. Several persons have inquired of me as to their merits, and I have always spoken in the highest terms of them, but never felt that I could write you confirming my statements until such time as they had been in use for about a year.

We have given them all kinds of tests, and will truthfully say that they have withstood all punctures, and with the exception of "blowouts," which are liable to occur with any type of inner tube, they have given excellent satisfaction.

Trusting this letter may be of benefit to you, I remain, Yours very truly, (Signed) JOSEPH A. WEBBER, Lieut., Aide to Chief.

ALL LIVE DEALERS SELL DOW NON-DEFLATION TUBES

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Mayo Radiators Make a Good Car Better and Their Use on a Car is a Hall-Mark of Quality.

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¶ Mayo Radiators perform their functions well under all conditions—and conditions at times are exacting. It is at just such times that Mayo quality asserts itself.

¶ The engineer can eliminate possible radiator troubles from his calculations by the adoption of the best possible radiator. The test of years and use has proved that we make it.

¶ Our capacity limit on new contracts is rapidly being reached.

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Model M	Model MR	Model Z
Touring Car, Fully Equipped,	"Flying Roadster," Fully Equipped,	6-Cylinder, 130-inch Wheel Base,
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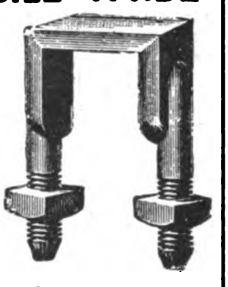
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FORGINGS for the AUTOMOBILE TRADE



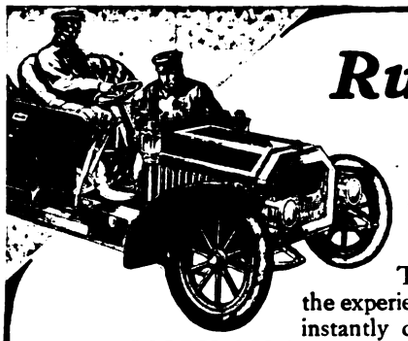
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is made in five different grades, each grade meeting the particular requirements of certain automobiles.

A valuable booklet on motor lubrication will be sent free on application. Lists every automobile made, and shows grade of MOBILOIL necessary for its perfect lubrication. Contains track records and other useful information.

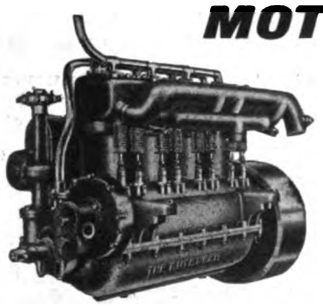
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MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

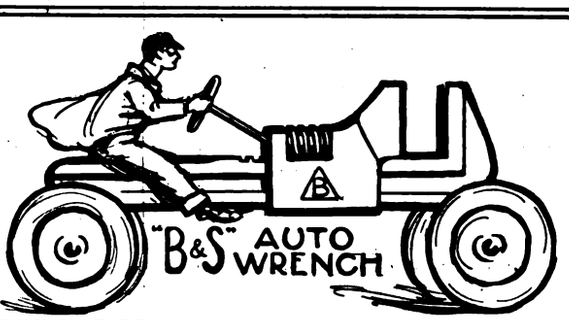
Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

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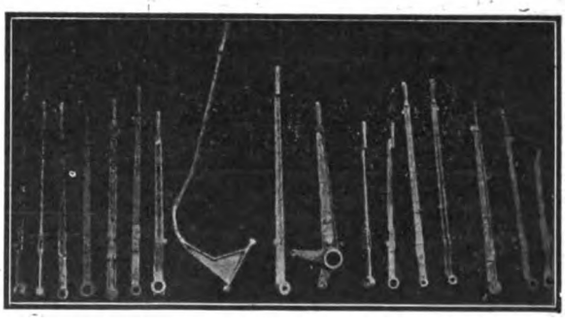
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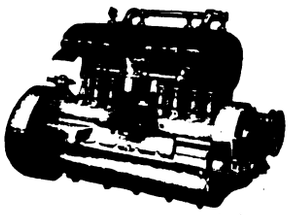


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Wridgway No Glare Shade
which adds to the efficiency of the lamps, and keeps glare from blinding other users of the highways. Can be fitted to any existing lamp.

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Means absolute reliability of the ignition system.
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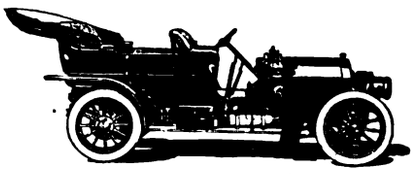
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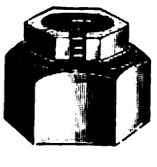
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A really good Dollar Spark Plug!

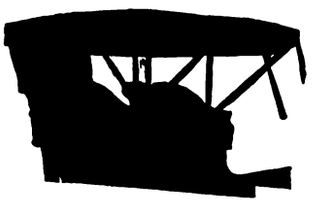
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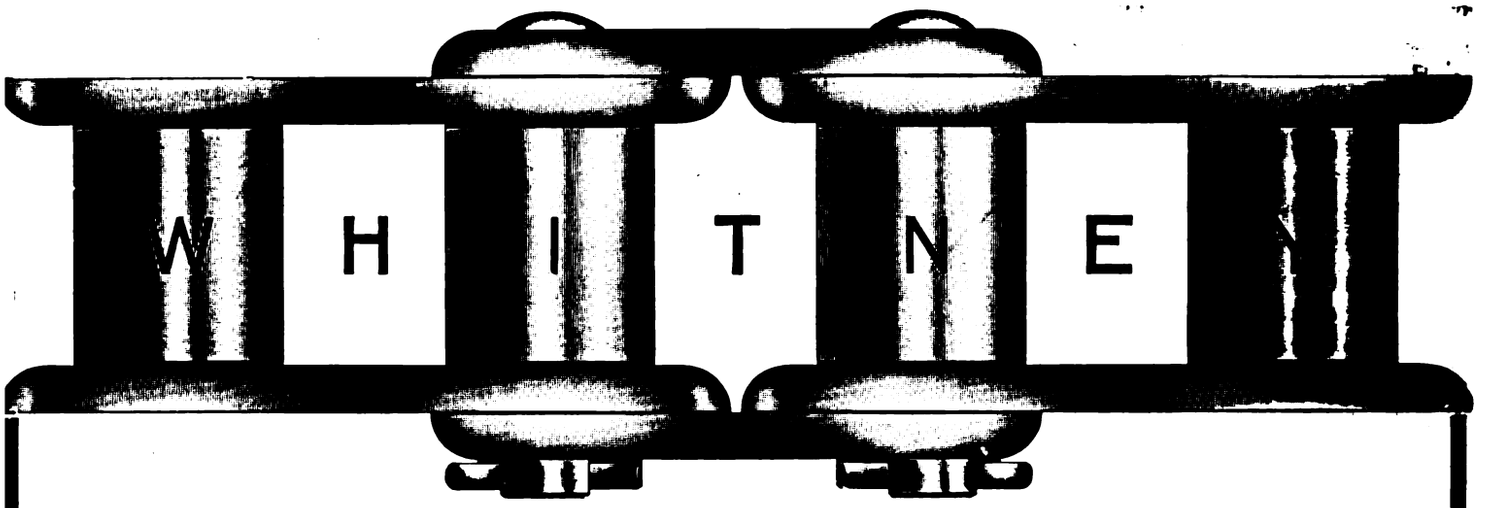
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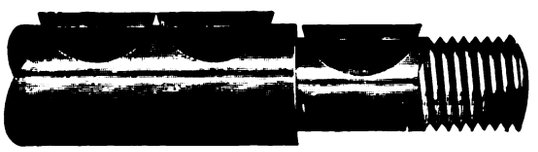
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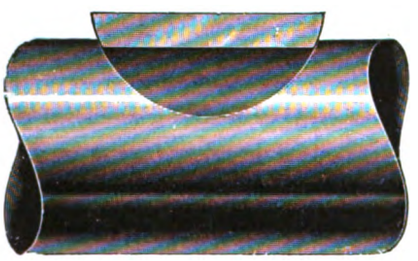


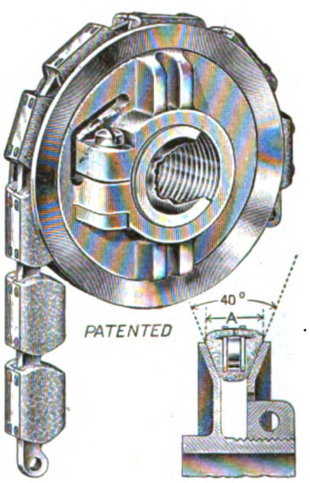
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All Motor Car Manufacturers should get full particulars before closing, as we have made great gains in strength and durability. With certain sizes of chain we have gained over 100% on earlier models.







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THE MOTOR WORLD

A trade paper giving the World's Motor News

Ten cents a copy—
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All Cars Sold by Us Are Licensed
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'09 Models Now being exhibited and delivered

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Sixty-Five Miles An Hour Guaranteed

Six cylinder, sixty horsepower; bore and stroke, 4¾ x 5½; Bosch Magneto, dual ignitition; four speed selective type transmission, ball bearings.

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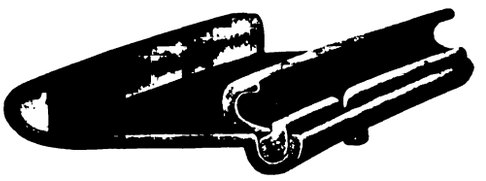
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The Standard Universal Quick Detachable Rim

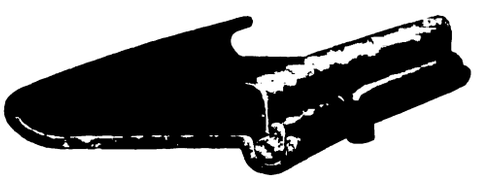
THE RIM DECIDED ON FOR 1909

Approved by the Mechanical Branch of the A. L. A. M.



FOR DUNLOP TIRE

The cuts show the simplicity of operation and the mechanical worth of the rim.



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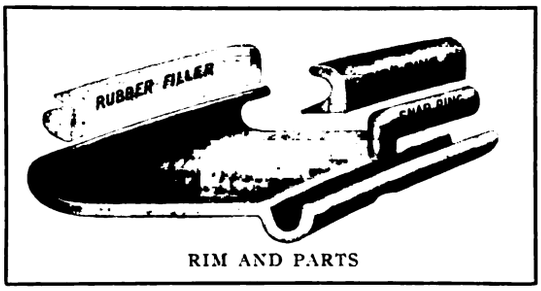
¶ After two years of consideration, the automobile manufacturers have chosen the Standard Universal Quick Detachable Rim as the most desirable of all the rims shown to be the standard equipment for American cars as soon as this change can be conveniently brought about. Its adoption signifies its perfection.

¶ There are only two parts to remove—the side ring and the snap or locking ring. Accommodates all standard sizes of tires, Clincher or Dunlop. To insure standard equipment all around specify

Hartford Tires

AND

Standard Universal Quick Detachable Rims



RIM AND PARTS

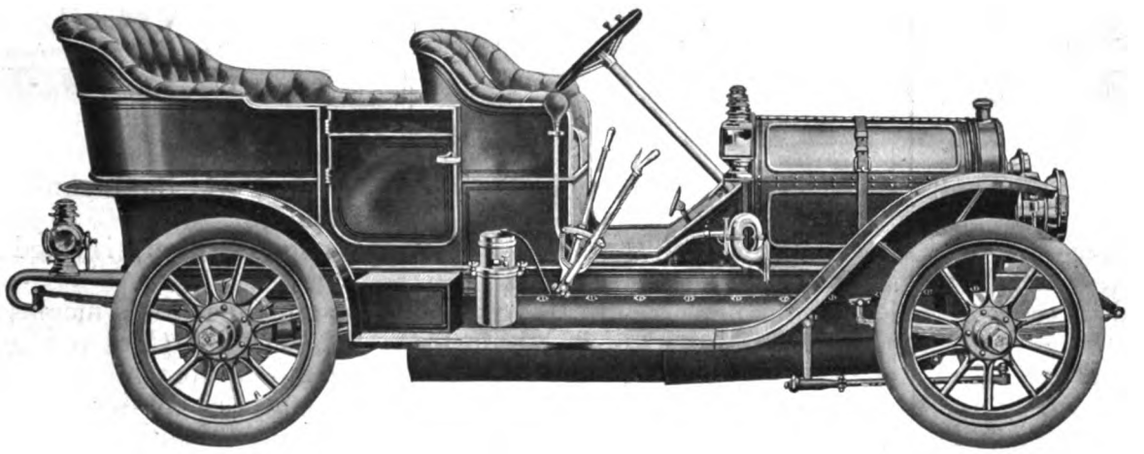
THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 530 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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1909
Pope-Hartford Models



Pope-Hartford Model S, $2750

The POPE-HARTFORD 1909 models embody all that is best in automobile construction and will be conspicuous in the foremost ranks of the automobile world.

We invite comparison of the details of POPE-HARTFORD cars for 1909 with those of the world's best motor cars. Because of their perfection, refinement and elegance they will appeal to the superior judgment of critical and discriminating purchasers.

OUR 1909 LINE WILL CONSIST OF THREE MODELS:

A Standard Touring Car similar to the above illustration, **Price $2750**

A Standard Roadster which will be illustrated in this space next week, **Price $2750**

A Pony Tonneau Car which will be illustrated the week following, **Price $2750**

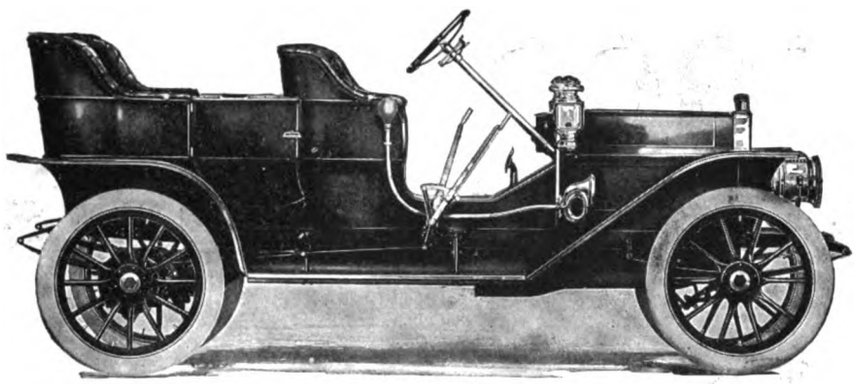
New and important improvements, not incorporated in any other motor car, are included in the POPE-HARTFORD 1909 CARS. Each improvement which we have added has been given a careful and thorough *test,* and our catalog, now in preparation, explains fully all the details and mechanical excellence of the new models. Let us place your name on our mailing list for an advance copy.

Agents almost everywhere. Correspondence invited with interested dealers.

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HARTFORD, CONNEOTICUT, U. S. A.

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E-M-F "30"

TOURING CAR $1250

THE NEWS

On June second at a dinner at the Cafe des Beaux Arts, New York, the organization of the million dollar Everitt-Metzger-Flanders Company was announced.

Today—less than three months from that date—this "hyphenated" concern is rated one of the biggest factors in the automobile industry.

The interest created when the personnel of the company was announced was increased to a veritable sensation when the specifications of its product, the E-M-F. "30" Car, were given to the world; and when the price for this splendid car, with full lamp equipment and magneto, was set at $1250, there ensued a small sized panic among the high-price contingent of automobile manufacturers—and those who thought they knew how to manufacture, but try as they would, were unable to see how we could do it at the price.

Of course we have their sympathy—we are sure of that.

We also have their advice—in chunks. "Raise the price to $1500—you'll sell all you can make," is the burden of their fatherly promptings.

Still we don't heed—don't even realize that we are on the very brink of destruction or that we are "throwing away a million or so" by selling a car at $250 to $500 less than any other concern ever has or can sell a car of equal merit.

You who read this have doubtless kept in touch with the development of the automobile industry during the past ten years. If so, you can recall that each successive year there has appeared some one car that possessed all the earmarks of success—that seemed to represent the highest state of development up to its time. And you recall that, with unerring instinct, that car sprang into instant favor with the trade and public alike.

Well the E-M-F. "30" has taken at a bound, and today occupies, that enviable position.

It is admitted leader—makers of cheaper cars are already saying "Just as good as the E-M-F. "30," while those whose product is listed a few hundred dollars higher, are busy explaining why. And without much success for a comparison of the product—details of design, materials and workmanship—shows the E-M-F. "30" to be incomparably superior at every point.

There is a reason: The men back of the E-M-F. Car have a standing in manufacturing circles that guarantees the excellence of product. And the car itself combines so many features every motorist knows to be the best, all agree it is a composite of superiorities.

Each man who examines the E-M-F. "30" or reads the specifications feels as if he had designed it himself so nearly does it approach his ideal in every detail, his heart's desire as a whole.

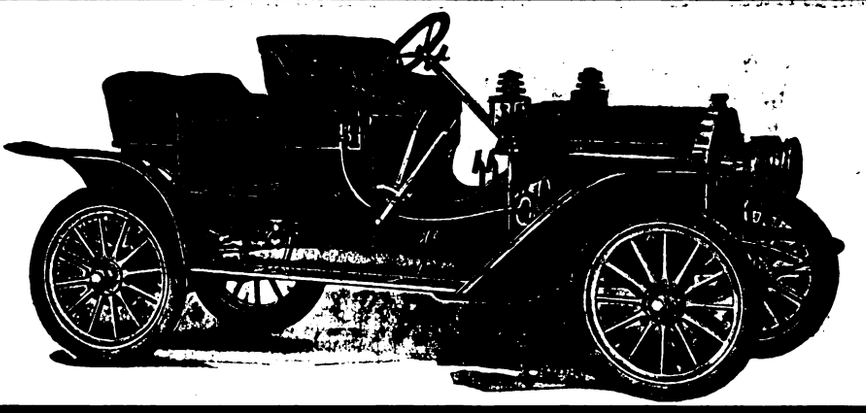
We believe that to the man who has not seen and ridden in an E-M-F. "30" Car, or to one—if any such there be— to whom a mechanical description conveys no clear idea, the names of the men—financiers, manufacturing experts, sales and advertising specialists—back of this product is a guarantee not only of quality in the car, but of conscientious, generous treatment to the buyer afterward.

That's why we lay so much stress on our organization; so much that envious rivals have dubbed us "The Mutual Admiration Society"—a compliment we accept cheerfully and gratefully; for of not all organizations can this be said. It's a factor that makes for concentrated effort and guarantees results that are unobtainable by any organization where this same mutual confidence and admiration are absent.

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E-M-F "30"

ROADSTER $1250



THE ORGANIZATION

First: The capitalists back of the E-M-F. Co. They are not tyros at the game. All are men of ripe experience in the business. All have been connected with it from its infancy—learned to know it in all its phases and caprices. Being young men they have optimism plus and a faith unfaltering in the future—the far future of this industry. They don't ask, don't desire, big dividends the first year. They have a pride in the product, a desire for success on broad lines—an ambition to excel. They are willing to forego the mushroom profits of today in order that a foundation may be laid, a policy formulated, that shall meet all conditions and stand the test of time. But money alone will not build automobiles. Capital unaided by experience, cannot cope with manufacturing problems.

Organization—a merger of brains and experience—is essential to success on a large scale. This fact was fully appreciated by Mr. B. F. Everitt, organizer, and president of the E-M-F. Company. In "framing up" his company he determined on an "all-star cast."

Until a few months ago, one of the largest manufacturers in the accessories field, Mr. Everitt's acquaintance with the men who did the things other men got credit for, eminently fitted him to select the right material. The result is a group of men every one of whom is a specialist—an acknowledged leader—in his own line. All have made good to a signal degree—the history of the industry is their history—the credit for its greatest achievements, theirs.

Than William E. Metzger, Secretary, and Sales Manager of the E-M-F. Co., no man in the motoring world is better or more favorably known. As Sales Manager of the Cadillac Automobile Co. from its inception, he has run the whole gamut of experience, taken a prominent part in every event of any importance, held many offices, been the receipient of many honors. The name Metzger stands for a broad gauge policy, a concrete sales organization, and to the buyer of E-M-F. cars ensures liberal treatment, at all times.

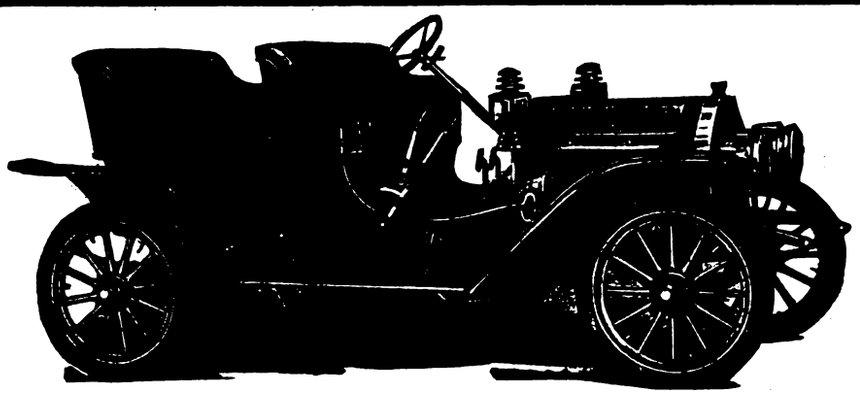
If, as all authorities agree, the future is to the concern that can produce on the largest scale, most accurately, most regularly and economically, then Walter E. Flanders is the very keystone to the arch of the E-M-F. organization. He is recognized as the greatest factory organizer, the keenest buyer, and by far the ablest producer the industry has known. As Manufacturing Manager of the Ford Motor Company until a few months ago, his record is patent to the world—it yet stands unequalled—unchallenged.

Back of Mr. Flanders are Factory Manager Thomas Walburn, General Superintendent Max Wallering and the several department heads—forming an "officers' mess" in which perpetual harmony prevails, because each is a specialist, an expert in his own line and none conflicts with another. It is only with such an organization that great things are possible.

Chief Engineer Wm. E. Kelly has been in the business from its infancy—he antedates some of the "pioneers" who make greater pretentions. Like others he has designed some cars that did not come up to his expectations—in later years by riper knowledge he has produced some of the very best. In the E-M-F. "30" Kelly and his corps of designers have realized a long cherished ambition.

E. Le Roy Pelletier, formerly Advertising Manager of the Ford Motor Company, is known by his work—and its results. In fact, there isn't a weak link in the chain—no man of mediocre ability filling an important position—no deadwood anywhere.

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E-M-F "30"

DEMI-TONNEAU $1250

THE CAR

Nothing added—no frills or furbelows. Nothing omitted that experience has proven or convention taught you to consider a necessary part of a first class motor car. Not one original feature—not a single novelty—no startling innovations. Not one experiment—not one hair-brained theory or half baked mechanical idea; not an untried invention—or metallurgical hallucination—will you discover in the E-M-F. "30."

Instead you'll find all the good, the simple, the reliable features you have come to know as standard.

In the early days there may have been some excuse for the maker trying out his inventions, his theories, on the buyer—at the buyer's expense. But today we know what details of construction go to make up a first class automobile—the wise manufacturer is the one who combines these rather than tries to invent new ones.

The motor is the accepted standard 4-cylinder verticle, four-cycle type—well built, with large valves, silent and smooth in operation. A magneto is a part of it—as it should be—not an extra.

The sliding gear transmission is superior to any other known type; and ninety per cent. of buyers prefer the "selective" system of operation. These are combined in the E-M-F. "30" in a little neater, a little more compact form than in any other car. The operating system is very nearly ideal.

It's admitted that the "unit" system of power transmission is ideal—transmission and rear axle in one; but it has been considered too expensive for any but high priced cars. You'll find it in the E-M-F. "30" in the neatest, lightest and most compact form.

The brake system is the best known—four brakes all acting on rear hub drums.

The steering gear is of the worm-and-sector type, identical in design, material and construction with what you'll find in cars of $4,000 to $5,000—simplest as well as best.

Of coil, radiator, commutator and all other parts the same holds good—they are the best types you know.

A magneto has, hitherto, been considered only as a part of a high priced car—and then as an expensive extra in all but a very few cases. It is as much a part of the E-M-F. "30" as are the valves. We believe a constant, uniform and absolutely reliable source of electrical energy is essential to pleasurable motoring. We've set the pace for all makers by building the magneto into the motor and including it as a part of the equipment without extra charge. Other cars listed at prices to compete with the E-M-F. "30" figure more nearly $2000 when equipped with magneto, lamps, top and other touring necessities.

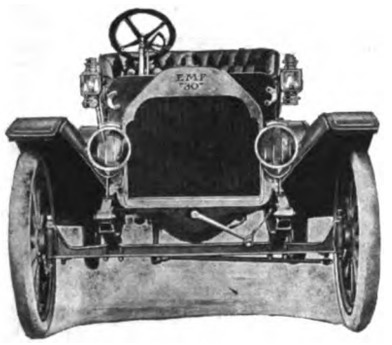
The E-M-F. "30" is not an "assembled" job. We make every part of it in our own factories.

The day of the "assembled" car has passed. An automobile is too complex a piece of mechanism—requires too accurate a degree of workmanship on every part, to lend itself to the methods of parts makers and assemblers. We speak by the book, having had extensive experience in the "assembling" field.

Makers of "assembled" cars have our sympathy; buyers of them our commiseration.

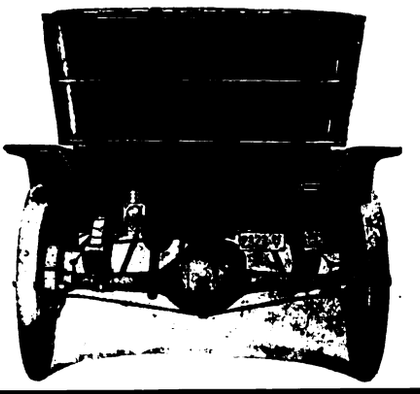
So long as motor, axles, transmission and other vital parts are farmed out to different makers, accuracy is absolutely impossible,—interchangeability unobtainable. And the failure of a parts maker—or a discontinuation of business relations between him and the concern who furnishes the nameplate—leaves the owner in a helpless, hopleess position.

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E-M-F "30"

BEFORE AND AFTER



THE WHY AND THE HOW

Since the price of the E-M-F. "30" Car announced, this subject has been up for discussion—and criticism—in no less than two manufacturers' meetings, to say nothing of the countless informal gatherings of trade gossips where it has been the chief topic of discussion.

"Why," they ask, "why give the public a million dollars and more on your first 5000 cars (they all protest we'll raise the price so soon as the reputation of the car is established) by selling such a car for $1,250 when, goodness knows, you can sell all you can make at $1,500, or a few hundred dollars more for that matter? Why set the price so low?"

"In order to increase the quality," we answer.

They don't understand—and yet they claim to be manufacturers.

Here's the explanation—its obscurity lies in its very simplicity.

A better car can be manufactured and sold for $1,250 than is possible at twice that price. Mull that over.

There's no catch—no play on words. It means exactly what it says. And here's why:

For every man who can afford a $2,500 car there are 500 who can afford one at half that price—500 to 1!

Figure it out: statistics prove there is only one man earning $5,000 a year for every 500 who earn $1,800—and, whereas, no man with an income less than $5,000 can afford a $2,500 car, a $1,250 car should not be considered a luxury for a man earning $1,800 a year.

Certain of our market, we can plan on a large scale—12,000 cars in a year. Buying for this quantity we get the lowest price on raw materials. Manufacturing in such quantities we are able to adopt the most modern methods and to install highly specialized machinery. We cut the cost of production in half. And we increase the quality at the same time because methods are possible to us that no maker of $2,500 cars—producing in the small quantities the limited demand permits—can adopt.

Here's one example that illustrates why:

The cost of dies for making one part of the rear axle of the E-M-F. "30" Car is $9,000. Suppose the output be only 100 cars of this model—the "overhead" on that part would be $90 in each car. Carry the same practice through the entire car and it couldn't be sold for $20,000! On 1000 cars it would still be prohibitive—$9.00 per car. On 2,500, which some "name plate" manufacturers call "large quantities," it still figures $3.60 for tool cost on only one of over 1,000 parts in the car. On 12,000 cars it amounts to the insignificant sum of 75 cents per car. And the part is absolutely interchangeable—lighter, stronger, better in every way than any similar part has been made before in cars of the highest price. Of course not all items reduce so rapidly, but throughout the entire car the saving is more than half.

In giving the buyer the full benefit of this saving we do not pose as philanthropists—we are merely making sure of our market without which the manufacturing of 12,000 cars would be a risk no sane concern would venture to assume. The price makes the market—the ready market makes quantity production safe—quantity production makes the price possible. It's as complete as a circle and as simple.

Send for detailed information and specifications.

EVERITT-METZGER-FLANDERS COMPANY, Detroit, Mich.

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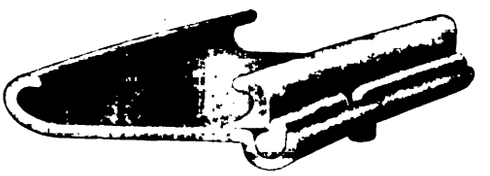
DID YOU NOTICE

that all the E-M-F. 30 cars will be fitted with

MORGAN & WRIGHT TIRES

as a guarantee that the tire equipment shall be above criticism.

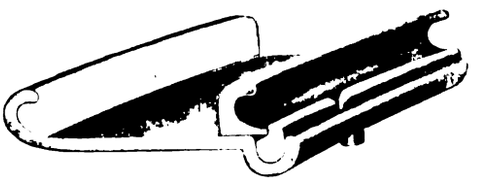
There is no method of making friends equal to the method of making good



For Clincher Tire

The Standard Universal Quick Detachable Rim

As an evidence of the favorable impression this rim has made upon car manufacturers, it may be stated that it has been adopted by the Association of Licensed Automobile Manufacturers as standard equipment for American cars; the change to take place as soon as it can be conveniently arranged.

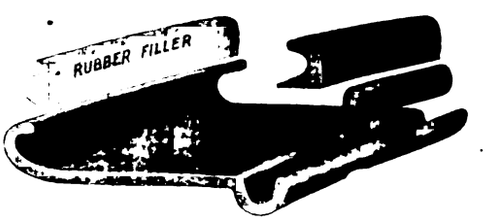


For Dunlop Tire

Removed and applied by simply unsnapping or snapping the locking ring. No turnbuckle to bother with.

Accomodates any standard size tire, Clincher, Dunlop or Quick Detachable.

Morgan & Wright Tires and Standard Rims would furnish a matchless equipment for your car, from the standpoint of both economy and modern rim design.



Rims and Parts

MORGAN & WRIGHT, Detroit

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$2000

THE SELDEN CAR

Finished the Glidden Tour with a CLEAN SCORE and Was Deprived of a "Perfect Score" by a Technicality

We entered a stock car, which had already been run over 5,000 miles, without any shock absorbers, straps, bumpers or other safety appliances, complying strictly with the rules as to equipment. (All other cars were equipped with these devices.)

Our car was equipped with a speed indicator, the sprocket connection of which worked loose crossing the mountains in Western Pennsylvania and fouled our steering knuckle, making it impossible to avoid a large boulder in the middle of the road, and we broke a front spring in consequence.

The broken spring did not penalize us, nor the repairing of the spring, but because we used four machine-made nuts (instead of four hand-made nuts) we were disqualified from further contest for the Glidden Trophy.

Our car continued the tour as a non-contestant, checking in and out every day, observing all the rules and finished with a clean score.

It was in such good condition upon arriving at Saratoga that we made a non-stop run from Saratoga to Rochester, a distance of 272 miles on the following day without any adjustment whatever.

Our "extra parts" bag was not opened on the entire trip. No other car did any better.

COMPARE OUR CAR WITH OTHERS IN THE TOUR AND SEE WHAT WE HAVE ACCOMPLISHED

Demonstrating the highest quality of workmanship and material, durability, stability and the all-important fact that a strictly first-class gentlemen's car can be made and sold for $2000.

Why Pay Double the Price for a Name-Plate?

Duplicates of this car are now ready for delivery.

All our cars are sold with a guarantee and with all that we have out during the past season the cost of repairs amounts to little or nothing.

The "Silent Selden" (as the car has become known by its quiet running) is made on honor, a credit to the name of the man who invented gasolene automobiles, and every owner is proud of his purchase.

Superb riding, roomy tonneau, luxurious upholstery, smooth running, great hill climber, flexible and easily handled, economical in up-keep, stylish and attractive—the coming car of the multitude.

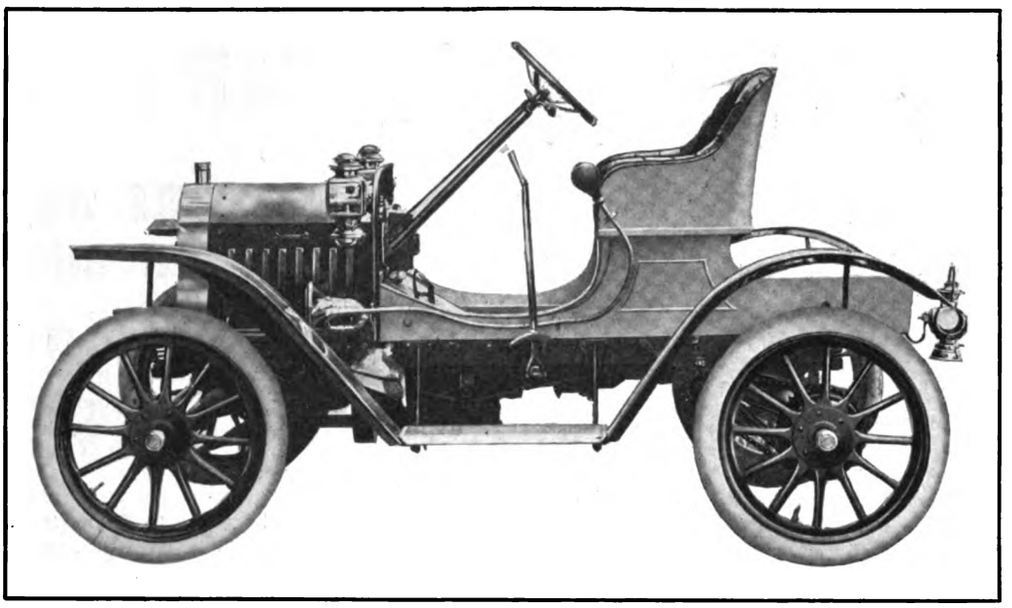
Now closing 1909 agencies—over half our output already spoken for. Good live agents wanted everywhere. Send for catalog and agency proposition.

SELDEN MOTOR VEHICLE COMPANY, Rochester, N. Y.

Members A. L. A. M.

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DEALERS—We Are Delivering Now



Model B

BRUSH Runabout

$500 - $550

While waiting for the wonderful things to happen next month or next year, we advise you to get busy now and take an agency for the Brush Runabout.

First convince yourself that the car is right. We have been manufacturing the Brush Runabout for over a year, and selling all we could make. Every month the car has been better than the month before. Now the new Model B, in which are collected all the features that have proved best, from which has been eliminated every feature that has proved troublesome in the hands of the unskilled user, the whole crystalized into an harmonious unit and clothed in an external design more pleasing to the eye than any small car in existence—this car is actually and literally not only the **best**, but the **only** car of its class. You, yourself, know how many buyers there are in this class.

Our records—such straws as the winning of the Algonquin Hill Climb, various endurance tests, the five car efficiency run just completed, the testimony of users, the adoption of our $600.00 Delivery Wagon by the Post Office Department at Washington—all speak for themselves. The genius of Mr. Brush, the ability and long experience of our manufacturing heads, the equipment and organization now tried out and molded into condition by the year and a half of work together on this one car means much to you.

Your final investigation should be a visit to our factory. We will show you new cars, cars and parts in work, every process and material, cars that have r··n thousands of miles, and we will give you every facility for finding out everything, testing everything.

There have been remarkable sensations before now. There will likely be more of them. Two of the biggest concerns startled the trade, way back, with $500.00 announcements. What did they turn out to be? How many strings were there to them? What discounts and conditions applied? How long did it take them to develop? **HOW MUCH MONEY DID DEALERS MAKE OUT OF THEM THE FIRST YEAR FOLLOWING THE ANNOUNCEMENT?**

Meanwhile, here is the Brush Runabout, purified by the fire of a year and a half experience in manufacturing, delivery and use, still on deck in spite of dire prophesies, with none but friends among its dealers and users, actually delivering every day—now—a better car than expected, but at the same price and regular discounts.

Will it pay you to forget your daily bread to chase the will-o'-the-wisp of "swell propositions"—marvels of the typographical art—astounding promises of the to-be-but-not-yet?

We stake our corporate word and our individual word, every one of us (and you know who we are), that the Brush Runabout Model B is the "rightest" little car ever built. It runs right, stands up persistently, has lots of power, has the sweetest, cleanest control you ever saw, and what we have always said about its durability is so. The lines of the Model B are so graceful and its finish so neat that people fall in love with it at sight.

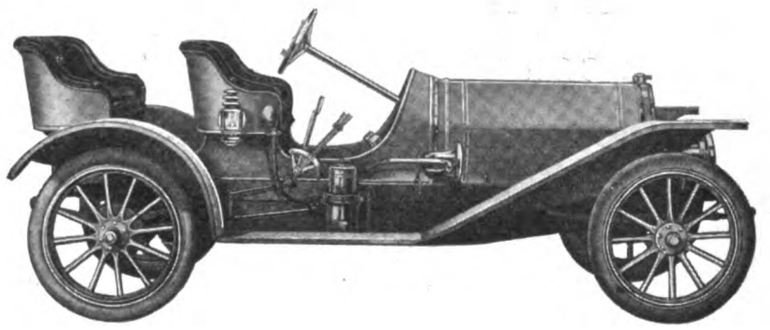
We have not taken and will not take on more dealers than we can supply. Come in now if you want to be sure of a sure thing. Don't wait—you have lots of time to figure on the will-'o-the-wisps, but the Brush Runabout is a **right-here-now** thing.

BRUSH RUNABOUT COMPANY, Detroit

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1909

Overland



Model 34, 6-Cylinder

$2,000

SPECIFICATIONS:

6-cylinder, vertical motor, cast singly.
Bore, 3½; stroke, 4½.
H. P., 35.
Lubrication—mechanical oiler, positive driven.
3-point suspension.
Water cooled, Thermo-siphon.
Spark and throttle control on top of steering pillar.
Double system of ignition with high tension magneto.
Three-speed selective transmission on rear axle.
Shaft-drive, bevel gear.
Internal expanding and external contracting brakes on hubs.
Wheels, 34x3½", Artillery type.
Goodyear Q. D. rims.
Water capacity, 6 gallons.
Gasoline, 12 gallons.
Wheel base, 116 inches.
Tread, 56 inches.
Half elliptic front springs.
Full elliptic rear springs with involute ends.
"I" beam front axle.

Equipped with high-tension magneto, headlights and generator, oil side and tail lamps, horn, and full tool and repair outfit. All bodies ironed for tops.

A choice of four bodies is given on the Model 34 Chassis.

Roadster with single rumble seat.
Roadster with double bucket seat, as illustrated.
Toy tonneau of exceedingly attractive design, and
Five Passenger straight line tonneau.

THE OVERLAND IS NO EXPERIMENT. THE OVERLAND HAS MADE GOOD.
THE OVERLAND AGENTS HAVE MADE AND WILL MAKE MONEY.

Write for specifications on our 4-cylinder models.

OVERLAND AUTOMOBILE COMPANY

INDIANAPOLIS, INDIANA

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To The Trade:

Owing to a misunderstanding caused thru information furnished it by one of our competitors, the Mechanical Board of the A. L. A. M. approved for adoption a certain type of Quick Detachable Rim.

This action was taken, however, before the said Board had inspected or even considered the compromise Rim offered by the Goodyear Tire & Rubber Company, and—furthermore—before it knew we were absolutely without representation before it in all its deliberations in connection with the selection of a Standard Rim—all due to the above misunderstanding.

We happened to come in contact with the Board in a most casual way, and after learning of its decision, had a general understanding, after which:

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It decided to hold in abeyance the adoption of a Standard Rim until this Company had an opportunity to present its side of the case.

Therefore, truthfully speaking—

The A. L. A. M. Mechanical Board has not finally adopted a Standard Rim, and will not do so until the Goodyear Tire & Rubber Company has been given a square deal.

The new Goodyear Compromise Rim has reversible Side Rings; dispenses entirely with the use of an extra rubber filler; meets every requirement of all tire manufacturers as regards measurements; and is so superior to the Rim proposed for adoption that there is no question but that it will be the final choice of the A. L. A. M. Board—and, in fact, all manufacturers of automobiles.

The Goodyear Tire & Rubber Co.

AKRON, OHIO

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Rambler

Model 34



Price, $2,250
Other Models, $1,200 to $2,500

TRY IT ON THE HILLS

Test this car at half speed on a hill or sand road where power and every ounce of it is needed. Notice how steadily and powerfully it pulls when running slowly under load.

The capacity of the offset crank shaft for doing this extra work is most noticeable at low engine speeds. All that power which in other engines is lost through friction on the bearings and cylinder walls, is added to the driving force by the Rambler offset crank shaft. It reduces friction; eliminates hammer on bearings; gives more power.

The straight line drive delivers the power direct and with least frictional loss to the rear axle. Let us demonstrate these features and the silence and the comfort of this car.

Tell our nearest representative to call at your home and take you to your place of business some morning in a Rambler. Or write your name and address and "Model 34" on a postal and mail to us today.

THE CAR OF STEADY SERVICE

Thomas B. Jeffery & Company, Main Office and Factory: **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, August 27, 1908. No. 22

SWEEPING REDUCTIONS ON TIRES

Diamond Rubber Co. First to Announce New Figures—Same Prices Apply on Clinchers and Quick Detachables.

The tire situation, which has come to mean the new prices which will prevail on tires, undoubtedly will unfold itself with great rapidity within the next ten days.

As has been plain for several months past, the tire manufacturers have not been slow to appreciate the evils that have grown out of the inflated and fictitious list prices and the correspondingly large discounts that have prevailed, to which the Motor World was first to direct attention. These conditions have served to permit the price-cutters, bargain counters and so-called "discount houses" to wax fat at the expense of the legitimate trade and the public and it was to correct these abuses that the tire makers have been bending their efforts. It was well known that reductions were in prospect, but as little could be learned of their exact extent, every one concerned has been awaiting with undisguised anxiety the announcement of the new figures.

The Diamond Rubber Co. was first to relieve this suspense. Their list prices for their 1909 tires were made public this week. They disclose sweeping reductions all along the line, both in respect to casings and tubes. The range of the reductions is shown on the prices which formerly applied and which hereafter will apply on the more popular sizes. For instance, the 28x3 Diamond casing which previously retailed for $22.65, is now listed at $14.05, the tube which sold for $5.05, now is catalogued at $3.50. The 30x3 has been reduced from $24.40 to $15.05; the 30x3½ from $31.55 to $22.20 and the 34x4 from $45.25 to 34.50. The list of the corresponding inner tubes have been lowered respectively from $5.40 to $3.75, from $7.45 to $5.05, and from $10.20 to $6.90.

Not the least significant feature of the Diamond Rubber Co.'s new scale is the fact that the same prices apply alike to both the clincher and quick-detachable types of wrapped tread tires. Heretofore, the quick detachable has been held at an advanced figure. The new scale in its entirety is as follows:

Size.	Casing.	Tube.
26 x 2½	$10.90	$2.80
28 x 2½	11.80	3.05
30 x 2½	12.70	3.20
32 x 2½	13.65	3.40
34 x 2½	14.55	3.55
36 x 2½	15.40	3.75
26 x 3	13.00	3.25
28 x 3	14.05	3.50
32 x 3	15.05	3.75
32 x 3	16.10	3.95
34 x 3	17.15	4.25
36 x 3	18.15	4.50
38 x 3	19.20	4.70
28 x 3¼	16.80	4.60
28 x 3½	20.65	4.70
30 x 3½	22.20	5.95
32 x 3½	23.55	5.35
34 x 3½	25.70	5.70
36 x 3½	27.80	6.00
30 x 4	30.00	6.15
31 x 4	31.10	6.35
32 x 4	32.25	6.55
33 x 4	33.35	6.75
34 x 4	34.50	6.90
36 x 4	36.75	7.25
38 x 4	38.95	7.65
40 x 4	41.20	8.00
42 x 4	43.35	8.35
30 x 4½	38.50	7.60
32 x 4½	41.15	8.05
34 x 4½	43.75	8.50
36 x 4½	46.35	9.00
38 x 4½	48.95	9.50
40 x 4½	51.55	10.00
42 x 4½	54.20	10.45
34 x 5	53.90	10.05
36 x 5	56.95	10.60
38 x 5	60.05	11.15
40 x 5	63.15	11.65
42 x 5	66.25	12.25
36 x 5½	66.50	11.95
38 x 5½	70.20	12.60
40 x 5½	74.00	13.15
42 x 5½	77.75	13.80

White Steam Cabs Make Their Appearance.

Two White steam taximeter cabs have made their appearance—the first of the cab output of the White factory. They are of 20 horsepower and of the convential design of such vehicles, and are equipped with American taximeters.

RICE AND JOHNSON THE BIDDERS

Identity Disclosed of Prospective Purchasers of Pope-Waverly Plant—Their Offer Uncovers a Big Cash Balance.

September 7th is the date set by the Chancery Court of New Jersey for a hearing on the petition of the receivers of the Pope Motor Car Co., for instructions as to whether or not they shall accept the offer made for the Pope-Waverly plant in Indianapolis. The hearing will be held in Chancery Chambers, Newark, at 10 o'clock a. m.

The petition was presented to the court on Thursday last, and contrary to first reports, it disclosed that the bidders for the property are Herbert H. Rice and Wilbur C. Johnson, of Indianapolis, who are the same men who, soon after the Pope failure, formulated and printed a prospectus of the "Waverly Motor Car Co." with a view to acquiring the Pope-Waverly plant. Mr. Rice is, and has been, the manager of the factory, Mr. Johnson being associated with him in the management. The price they have offered for the plant and all rights to the business, except the cash in bank, is $200,000. The amount of this bank balance proves to be surprisingly large. On June 30th last it was $106,420.71.

As is well known, the capital stock of the Pope Motor Car Co. is owned or controlled by the Pope Mfg. Co.

Gramm Locates at Bowling Green.

The Gramm-Logan Motor Car Co. has completed its organization with J. B. Wilson, president; B. A. Gramm, vice-president and general manager; and Fred Bisantz, superintendent, and has located in Bowling Green, O., just south of Toledo. The product will be an improved type of truck, similar to the Logan truck which Gramm designed when with the Logan Construction Co., of Chillicothe, O Several other commercial models are in view.

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The Week's Corporations.

Topeka, Kan.—Auto Carriage Co., under Kansas laws, with $15,000 capital.

Jacksonville, Fla.—Ideal Auto Manufacturing Co., under Florida laws. Corporators—Hugh Partridge, T. A. Stewart, and C. E. Clarke.

Miilwaukee, Wis.—Wisconsin Automobile Exchange, under Wisconsin laws. Corporators—L. Deetjen, A. F. Eckstein and Theodore Deetjen.

Chicago, Ill.—Straight-Roberts Auto Co., under Illinois laws, with $75,000 capital; automobile business. Corporators—J. R. Roberts, J. J. Straight and N. Goltra.

New York City, N. Y.—Gyroscope Automobile Co., The, increase of capital from $5,000 to $100,000. Attorneys—Palmer & Sereles, 68 William street, New York City, N. Y.

Pittsfield, Mass.—Motor Transportation Co., under Massachusetts laws, with $50,000 capital; to manufacture automobiles. Corporators—A. Sampson; R. Schaff, Newton, Mass.

Springfield, Ill.—Four Drive Auto Co., The, under Illinois laws, with $250,000 capital; to manufacture and sell automobiles. Corporators—C. T. Murphy, A. P. Dewey, L. E. Hill.

East St. Louis, Ill.—Mississippi Valley Automobile Corp., under Illinois laws, with $50,000 capital; general automobile business. Corporators—Henry S. Turner, Jr., John H. Phillips, William J. Peck.

Boston, Mass.—Taximotor Cab Company of Boston, under New Jersey laws, with $500,000 capital; to manufacture motor vehicles. Corporators—Cornelius A. Cole, Richard F. Tully and Franklin Vreeland.

Lowell, Mass—Lowell-American Automobile Co., The, under Massachusetts laws, with $100,000 capital; to deal in automobiles. Corporators—John F. Spaulding; Moses Lahue, Lowell, Mass.; Jesse G. Hanson.

New York City, N. Y.—Saratoga Auto Top and Body Co., under New York laws, with $15,000 capital. Corporators—Adolph J. Shary and Anna D. Shary, 336 West Seventieth street; Henry A. Blumenthal, 135 Broadway, New York City, N. Y.

Plattsburg, Pa.—Aldridge Roller Bearing Mfg. Co., under New York laws, with $200,000 capital; to manufacture vehicle bearings. Corporators—L. J. Aldridge, Plattsburg; M. F. Aldridge, Dr. A. W. Fairbanks, Chazy, Pa.; B. G. Hitchings, New York City, N. Y.

McCue Will Make Parts, Not Cars.

Despite the published reports to the contrary the McCue Co., Hartford, Conn., will not engage in the marketing of complete cars. The concern merely has added automobile parts and chassis to its older business of supplying carriage parts to the manufacturing trade. Its new line will include a complete line of forgings, brake and control levers, hubs, bearings, and axles, and it will be able to produce an assembled chassis, ready for body or with body in the white. No finished cars will be delivered, however, and the predicted "McCue-Hartford" will not appear.

"Desert Flyer" Will Leave Nevada.

After they have succeeded in selling about 10,000 shares of stock to citizens of Council Bluffs, Ia., the promoters of the Independent Transportation Co., which has been organized there, will have the Nevada Motor Car Co., with which it is interrelated, make a number of big passenger and freight cars for service between Council Bluffs and Omaha. The Nevada company is to move from Reno to Council Bluffs and establish its factory, arrangements for leasing a factory at Washington avenue and North Main street being under way. So far the chief product of the Nevada concern, which has been capitalized at $500,000, has been one "Desert Flyer," an immense car weighing five tons, capable of running on prairie, desert, street or railroad tracks.

Kokomo to Celebrate an Anniversary.

Kokomo, Ind., made famous by the Haynes and Apperson automobiles, and more recently by Will Hodge in Booth Tarkington's play, "The Man from Home," will celebrate the fifteenth anniversary of the motor car industry there. An invitation will be extended to all Indiana motorists to participate in the festivities, George Ade included. Automobile races, a parade, gymkhana and other entertainment will be given to make the day, September 2, a great one.

New Haven Invites Bids for a Runabout.

Bids for an automobile runabout are being solicited by the board of fire commissioners in New Haven, Conn. Sealed proposals for a machine to meet the board's specifications, which are on file, will be received up to September 2. Forms and information may be obtained from S. J. Metzger, secretary of the board.

Rutz Joins New Departure Staff.

W. F. Rutz, formerly roving representative of the Continental Caoutchouc Co., has joined the staff of the New Departure Mfg. Co., Bristol, Conn. He will be identified with the recently instituted ball bearing department of the company.

Arbuckle Becomes Winton Supervisor.

Sales Manager Churchill, of the Winton Motor Carriage Co., has appointed George Arbuckle chief of Winton supervisors. Arbuckle has been on the Winton staff since 1902 and is well known to the trade from coast to coast.

Baker to Sell Perfection Springs.

E. F. Baker, of Boston, has joined the forces of the Perfection Spring Co., of Cleveland. He will have charge of the territory east of Buffalo.

In the Retail World.

The Gyroscope Automobile Co., of New York, has certified to a large increase of capital—from $5,000 to $100,000.

The Michigan Automobile Co. has opened a garage on Sixth street, Red Jacket, Mich. It will be in charge of Paul Pawler.

The Wilson Automobile Co., of Wichita, Kan., has been sold to J. H. Butts & Son. The business will be continued at 118-120 South Lawrence avenue, its present location.

The Hoff Automobile Co. has been organized in Tucson, Ariz., and has taken a location at Broadway and Scott streets. The concern will do a renting, repair and agency business.

The Irvin Automobile Co. has started business in Jefferson, Ia., headed by Edward Irvin. In addition to handling the Mitchell, the concern will do a general garage business.

The Glens Falls Automobile Co., of Glens Falls, N. Y., has moved into its new three story brick and concrete garage at the top of Glen street hill on Trunk Line road. The building has storage capacity for 100 cars, and is equipped with repair department, paint shop and all modern improvements.

The small amount of $21.35 is involved in an appealed case which is to be tried before the Circuit Court at Portland, Ind., but the question at issue is somewhat important. Arthur V. Jones, of the Jones Cycle and Automobile Co., Portland, won in a suit tried before Squire A. G. Lewis, a local magistrate, wherein the Bird-Sykes Co., of Chicago, sought to recover $21.35 for repairs on an automobile. Jones resisted the claim on the ground that the plaintiff company had sold the automobile to him, and that the repairs were to be furnished by the sellers.

Where Imitation is Made Expensive.

That trading in imitations has its dangers from a legal standpoint has been again emphasized by the action of an English court in imposing a fine and costs amounting to over $250 on a London and Paris firm for selling imitation De Dion automobile parts as the genuine. It was proved that the defendants had supplied customers with valves, represented as of De Dion manufacture, that were De Dion only in form and appearance, and the court was prompt in punishing the false trade description.

Wants to Get Rid of Apprentice.

One of the first apprenticeship cases in years to get into court has developed through the action of the Cadillac Motor Car Co., of Detroit, Mich., in seeking to be relieved of its parts of a contract with John Bunge concerning his son, Ernest T. Bunge. The company claims the boy did not keep his part of the contract, and therefore asks that the agreement be declared void.

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UNUSUAL SUIT OVER DISCOUNT

Maker and Agent Lock Horns Over Parts Used in Repairing Car at Factory—Verdict for Agent.

Judge Hodson, in the municipal court at Buffalo, N. Y., has decided in favor of the defendants, the Centaur Motor Co., a suit brought by the Winton Motor Carriage Co. of Cleveland, Ohio, which involved an unusual and interesting point.

It appears that in 1907, when the Centaur company was the Buffalo agent for the Winton cars, an automobile was sent to the factory for repairs. In the course of the repairing, new parts to the value of $211.98 were incorporated. When the car was returned to Buffalo, the bill rendered included the full value of these parts. The Centaur people refused to pay it, claiming that under the terms of their agency agreement they were entitled to 25 per cent. on all parts. The Winton company declined to allow the discount and the suit resulted.

In his opinion Judge Hodson says:

"It seems to me that the contention of the defendant is reasonable. It is admitted that he would be entitled to the discount if the parts put on had been sent to Buffalo unattached. I am unable to see why it interferes with the defendant's rights that the parts were sent attached to the automobile. No matter how they got here, they were delivered to the defendant's order and he should have the commission."

British Imports and Exports Shrinking.

British imports of automobiles, chassis and parts have shown a steady increase for the first six of the seven months from the first of the year the total for the seven months ending with July amounting to £2,598,076. Although marked with monthly increases this total is not quite so large as that of last year for the same period, which was £2,934,688. During the seven months period of 1908, the gross imports of complete cars were 2,724 machines, having a value of £986,571, while incomplete chassis to the number of 1,882 were imported, with a value of £608,679. By far the largest item, however, was the importation of parts which for the period reached £1,002,826. The returns for the month of July show a decrease of £34,808 as against the importation of cars, chassis and parts during July, 1907, making the trend of the month at variance with those which preceded it this year. Of complete cars 421 were imported during the month, having a value of £145,142. The number of chassis imported was 306, valued at £99,076, while the importation of parts aggregated £166,760, making a combined total of £410,978 as against £445,786 in the corresponding month last year.

Falling off in the British exports is indicated both in the returns for July and for the seven month period. While the total in July, 1907, was £108,836 the figure for July of this year is but £83,993. The latter total was made up of the exportation of 137 complete cars, having a value of £54,665; and 5 chassis, valued at £1,725, together with parts to the amount of £40,730. The gross shipments during the seven months ending with July are returned at £677,139, which contrasts with £692,542 in the similar period last year.

Two New Travelers for Winton.

The Winton Motor Carriage Co. has engaged George H. Smith and Charles S. Calvert to cover eastern and western territory respectively. Smith was formerly Philadelphia branch manager for the White Co. Calvert has for several years sold Wintons in Newark, N. J., as a member of the firm of Calvert & Zusi. He has, however, disposed of his interest in the business.

Motor Stages for Michigan Promoters.

"From Hancock to Houghton" is the battle cry of Michigan promoters who are organizing a $50,000 company to operate a line of automobiles between the two cities across the Portage lake bridge. The cars to be used are 20 passenger machines, such as have proved highly profitable between Red Jacket and Laurium, Mich., and on other Michigan lines.

Kissel Doubles Capital and Will Enlarge.

The Kissel Motor Car Co., Hartford, Wis., has increased its capitalization from $100,000 to $200,000. Much of the added money will be used in the construction of a four story, 50 by 130 feet, addition to the plant, which when conpleted about Nov. 15 will enable the company to produce its own tops, fenders, hoods and other parts.

Revolutionizer Coming from Georgia.

With a capitalization of $100,000, the Atlanta Motor Co., of Atlanta, Ga., will shortly commence to "revolutionize automobile manufacture" with a device invented by William Knox Cleveland for applying power to all four wheels. Associated with Cleveland are Herbert L. Wiggs, Eugene Callaway and V. L. Smith.

Aurora Formally Declared a Bankrupt.

The Aurora Motor Works, Aurora, Ill., having been formally adjudicated an involuntary bankrupt, Thomas S. Huntley, as referee in bankruptcy, has set September 7 as the date for the first meeting of its creditors. It will be held in the court house at Geneva, Ill.

To Make Runabouts in Waldron.

A runabout at $500 is promised as a Waldron, Ill., product, the Waldron Runabout Mfg. Co. having recently been organized in the little village. Work has already been commenced on the new factory which the concern will occupy.

BIG BRITISH MAKER GOES UNDER

Gilt Domes and Marble Halls Fail to Save Argyll, Ltd.—Liabilities Total More Than $4,600,000.

One of the first of Great Britain's moderate price car manufacturing concerns, Argyll Motors, Ltd., is in hot water, threatened with bankruptcy and dissolution. Payment on its June debentures had to be passed and an "extraordinary general meeting" of the shareholders was called. The company had a remarkable rise from the ashes of a derelict cycle parts manufacturing concern known as the Scottish Manufacturing Co., of Bridgeton, Glasgow. Its early cars were assembled around standard motors and sold at so modest a price as to create an enormous demand.

This demand was made the basis of a $2,500,000 capitalization and stock flotation. The biggest exclusively motor car works in Europe was built on the shores of Loch Lomond, at Alexandria, near Dumbarton, which besides a general de luxe effect throughout, had gilded domes and marble halls that quite astounded the thrifty and cautious Scotch business men of the locality. In addition to the money from the stock more was found necessary, and a bond issue of $850,000 was put through. Having been unable to meet the interest payments on this and with its affairs in desperate shape, the stockholders were called together by the directors.

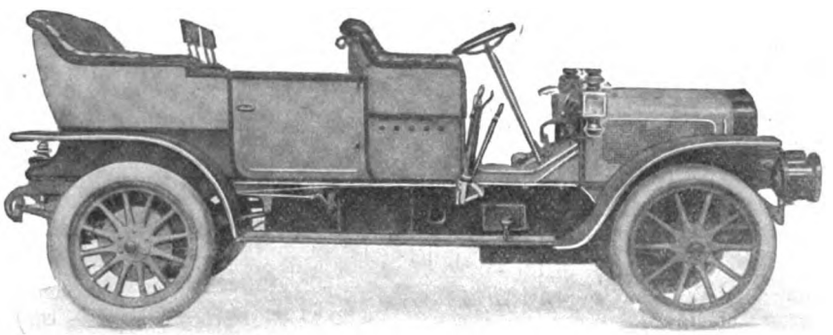
At the meeting the shareholders were told that they would have to agree to the company's voluntary liquidation or the creditors would throw it into compulsory bankruptcy. Voluntary liquidation was therefore agreed upon, with grumbling at the haste of the proceedings. The liabilities amount to $4,664,050 and the assets to $3,808,790. An effort at reconstruction is being made.

Too Much Grand Prix Ruined Weigel.

Having in a measure staked its business future on the probability of its cars making a good showing in or winning the Grand Prix race, Weigel Motors, Ltd., an English concern which has gained both fame and notoriety through the exploits of its chief, has gone into the hands of a receiver. Holders of the first debenture bonds objected to the fact that they did not get their interest payments. Over $15,000 was spent by the firm in competing in the Grand Prix, at a time when the company was badly in need of ready money. Weigel himself is credited with having said before the race, "If I win or go near I shall expect two or three years' good trade on my lines. If I do not, I lose a couple of thousand pounds." The poor showing of the cars and the accidents that befell them increased the loss, and brought about the receivership.

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THE 1909 WHITE STEAM CARS



During the coming season, the White Steam Cars will be built in two distinct models which, while differing widely in size, in power and in price, will follow the same general lines of construction. The horse-power ratings of these cars are based on the actual power delivered at the rear wheels, not merely on formulas or on the power delivered at the engine.

The larger of the new cars (shown in the above illustration) is known as the Model "M." It is rated at 40 steam horse-power and sells for $4,000, f. o. b. Cleveland, equipped with acetylene headlights and tank, oil lamps, horn and tool kit. The wheel base is 122 inches; the front tires 36 x 4 inches and the rear tires 36 x 5 inches. The car is regulary equipped with a straight-line seven-passenger body.

The smaller of the cars will be known as the Model "O." It is rated at 20 steam horse-power and sells for $2,000, f. o. b. Cleveland, equipped with oil lamps, horn and tool kit. The wheel-base is 104 inches and the tires, both front and rear, are 32 x 3½ inches. The car is regularly equipped with a straight-line five-passenger body.

The power plants of the two models are identical in design, the only difference between them being in the dimensions of the various parts. The principal mechanical change in the new cars, as compared with previous White models, is in the engine. The new engine is fitted with the Joy valve mechanism, instead of the Stephenson valve mechanism. The valves are driven from the connecting rods, as are the pumps. The eccentrics are done away with and the cylinders are brought close together, permitting the use of a short one-piece crank-shaft, with but two main bearings. The number of parts in the engine is reduced by one half and the entire construction greatly simplified.

As in previous models, the generator — the simplest steam-making device ever designed — consists simply of a series of coils of steel tubing joined together. The regulating system, whereby the temperature and pressure of the steam remain constant without in any way engaging or requiring the attention of the operator, is similar to that in the 1908 cars.

A Circular containing full details of the New Models will be sent on request.

THE WHITE COMPANY

CLEVELAND, OHIO

PITTSBURG, 138-48 Beatty St.
SAN FRANCISCO, 1460 Market St.
NEW YORK CITY, Broadway at 62d St.
PHILADELPHIA, 629-33 N. Broad St.
ATLANTA, 120-122 Marietta St.
CLEVELAND, 407 Rockwell Ave.
BOSTON, 320 Newbury St.
CHICAGO, 240 Michigan Ave.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, AUGUST 27, 1908.

Impressive Recovery of the Industry.

When the dubious outlook following the panic of last fall is considered it appears not alone that many of the storm signals were heeded in season to avert disaster, but that despite the unpropitious outlook an impressive volume of business has been done during the first half of the present year. A clue to the volume of sales made by the American makers during this period is furnished by the report of the receivers of the Electric Vehicle Company in which the income from the Selden royalty, which is figured on a 1 per cent. basis on all cars actually sold, is set down as $236,915.77. Working on this basis, and making practically no allowance for the sales of October, November and December, when the series of shows and the panic combined to stifle almost entirely the usual business of that season, it is fair to allow a gross income from sales of approximately $24,000,000 to the makers who are numbered with the Association of Licensed Automobile Manufacturers.

A careful canvass of the remainder of the industry shows a probable output of 77 other manufacturers amounting to no less than $23,190,000. This total includes a conservative estimate of the gross business done by the established makers of gasolene, steam and electric cars, and ignores a number whose income is more or less doubtful. In addition, it is unquestionable that at least $2,000,000 worth of business has been done by importers in the sale of foreign built pleasure cars and taximeter cabs, during the period referred to—January to July, inclusive.

On this basis, it is possible to conservatively place the gross sales of the entire industry at $50,000,000, which probably is an under-estimate. In addition to this sum, a large volume of sales of second-hand cars to new purchasers also has been consummated, but it is not possible even to guess at the value of that department of the industry. The movements of the second hand market, while practically an unknown quantity in the aggregate, constitute a tremendous factor in the annual turnover of money in the industry. In the export field, though no gain has been shown as compared with the corresponding period of a year ago, the total volume of business during the first six months of the current year, has been upwards of $2,970,000, of which $2,634,606 was the valuation of cars exported alone.

It is questionable whether any other industry producing a finished article can boast as creditable a showing. In place of the general downfall which at one time appeared to threaten, enough business has been done to more than fulfill the expectations of the most optimistic, the majority of manufacturers have been able to clean up their outputs without difficulty, and in place of the patching up process which might have been anticipated at this time, they find themselves enabled to go ahead with their plans for the coming year with clean assembling floors and wholesome balance sheets.

Latitude of One-Design Plan.

Not alone mechanical and constructional advantages attach to the policy which seems to be growing in favor with manufacturers, of making whatever variety of chassis their line affords one simply of size rather than design. There exist commercial or selling advantages, as well, which the men who are in the field are in a position to appreciate.

A preponderating proportion of makers long since have abandoned the idea of attempting to supply from one factory every type and size of car that the immense public may have a mind for, and while permitting a wide range of choice as to body and fittings, have latterly inclined toward a reduction of chassis styles and a concentration on a few models or even one. In some notable instances where more than one chassis is supplied, each type is distinguished from the others chiefly in the scale of its dimensions, the features of design being uniform in all. Thus the smallest chassis is but a reduction of the larger ones and whatever points of excellence are to be found in one are to be found in all.

Production is simplified in such a case by what the models have in common in the choice of metals, methods of testing and the assembly. There is not the diversity of single, double, four and six cylinder engines, shaft and chain drives, sliding gear and planetary transmissions, and the multiplication of problems that are born of trying to make one factory force master the manufacturing difficulties of several radically different types and handle them all in a smooth and steady flow.

But as production must of necessity take direction from sales needs and policy, there must be justification in the latter, also, before a final commitment to the one design plan. Unlike a wholesale merchant, a manufacturer's success and patronage is not dependent upon his ability to supply extremes and variety of market demand, but upon particular and specialized merits of his product. Especially in the automobile field is emphasis laid upon alleged points of superiority residing in certain exclusive or unusual features of design, and if the claims made bear the color of truth and are susceptible of convincing argument they are worthy of the whole line and not for a confinement to but one of the manufacturer's several types.

Having brought the prospective customer to a knowledge of the excellences of a car's material and design, it is then but a matter of helping select the size and power best suited to his requirements, a selection which presents no conflicts of the respective advantages of this or that radically differing feature. The uniformiy of the design through the several sizes permits of a concentrated and cumulative persuasion of the public as to characteristics or superiority,

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under which all of the sizes should benefit.

Where a maker casts an anchor to windward by developing a field for his products outside the pleasure and touring car domain, such as taximeter cabs, town cars, and commercial coaches and wagons, imperative reasons may frequently present themselves for special designs to meet the peculiarities of the service. In such a situation the questions to be met are those of a separate and distinct business.

Variation in body mounting in itself makes a concession to the individual demands of customers that covers a wide range, and before the possible combinations of different bodies with several sizes of chassis have been exhausted, the manufacturer has sounded a lengthy scale. This lessens the necessity for introducing the confusion incident to the presentation of markedly dissimilar chassis designs, and conserves the identity and reputation of the product. The one design plan thus allows great latitude in the markets sought while being a useful extension of the one car production ideal.

For the Rescue of "Fair Fame."

"Dunc" Curry "took a rise" out of the Motor World one day last week. "Dunc" doesn't like the American Automobile Association, or rather some of the officials connected with it, and it has pained him greatly that the Motor World should say anything in its favor and at the same time point out the influences at work in New York to bolster the shallow pretentions of the Automobile Club of America to appear as the dominating factor in American affairs.

Apparently Duncan—the "boys" all call him "Dunc"—was somewhat roiled by publication of the fact that the club has presented many of the "boys" with membership cards entitling them to the privileges of its cafe, library, etc; though far be it from the Motor World to suspect that Curry himself would accept the bit of pasteboard. For, though the residents of Keokuk possibly may not be aware of the fact, Mr. Curry is one of Mr. Hearst's scouts, and Mr. Hearst scarcely would stand for that sort of thing, least of all when a more or less capitalistic club is concerned. "Dunc" however, usually is so well disguised as an "auto editor," that not all of "the bunch" have yet penetrated his disguise, although he wears no whiskers to deceive them. Being "close to the boss" and having his ear at all times, Editor Currie writes only when he feels like it, which is not as often as may be imagined. But when he does write and "take a rise" out of any one, the "other fellow" is supposed to curl up and remain mum forevermore.

In the course of his withering blast last week, "Dunc" performed a large job of mind reading. He declared that the editor of the Motor World and every one else knows that "the A. A. A. is rotten from top to bottom, and that its conduct of tours and racing is a standing disgrace to the fair fame of the sport and the industry." It is a pity to injure Duncan's fair fame as a clairvoyant, but unfortunately we not only know nothing of the sort, but we take no stock in such idle and sweeping assertions. The rottenest thing with which we are familiar are the methods employed to make the A. A. A. appear in that light, nine-tenths of which spring from the personal dislikes and personal grievances of men with axes to grind.

Of course, we are aware fully that the American Automobile Association is not perfect or above criticism. No organization that necessarily must deal with aggrieved or otherwise disgruntled race promoters and competitors and hard losers generally ever will be able to satisfy every one. But we several times have pointed out how the A. A. A. can become near-perfect. We have publicly and specifically nominated several of the "boys" for the various offices within the gift of the association. We even nominated one of them for all the offices and the manner in which our suggestions were utterly ignored by the A. A. A. entitles us to be sorer even than Mr. Curry. It is true we overlooked Tom Moore, and, also, failed to nominate Mr. Curry himself, but it was an oversight for which we apologize. For we know only too well that Fair Fame is longing to be rescued by their protecting arms.

Meanwhile the A. A. A. remains the governing body in America and, as the Motor World stated last week when it aroused Mr. Curry so unduly, only A. A. A. sanctions are recognized, and should be sought. Anyone who does otherwise merely is being bluffed and led astray by men with grievances who are misusing their newspaper connections in trying to "get even." None is better acquainted with this exceeding large truth than Mr. Duncan Curry.

COMING EVENTS

Sept. 1, 2, 3, and 4, Chicago, Ill.—Chicago Motor Club's postponed 1,000-mile reliability run.

September 5-9, Los Angeles, Cal.—Automobile Dealers Association's reliability run to San Francisco.

Sept. 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7, Lowell, Mass.—Lowell Automobile Club's 200 miles road race, on Merrimac Valley boulevard.

September 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7-12, Hartford, Conn.—Connecticut State Fair Association's outdoor show and grand circuit races at Charter Oak Park.

September 11, Springfield, Mass.—Springfield Automobile Club's hill climb on Wilbraham hill.

September 12, Louisville, Ky.—Louisville Automobile Club's race meet at Churchill Downs.

September 14, Chicago, Ill.—Chicago Motor Club's annual economy run.

September 20, San Francisco, Cal.—Olympic Athletic Club's race meet at Tanforan Park.

September 23-24, Boston, Mass.—Bay State Automobile Association's 24 hours endurance run, Boston to Bretton Woods, N. H.

October 6-9, Chicago, Ill.—Chicago Motor Club's 1,000 miles reliability run.

October 7, Philadelphia, Pa.—Quaker City Motor Club's 200 miles road race, Fairmount Park.

October 10, Long Island—Elimination trials for Vanderbilt cup contest.

October 24, Long Island.—Vanderbilt cup contest.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

January 23-30, Philadelphia, Pa.—Philadelphia Automobile Trade Association's annual show.

February 6-13, Chicago, Ill.—National Association of Automobile Manufacturers' show, Coliseum.

February 27-March 6, Hartford, Conn.—Automobile Dealers Association's annual show.

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THOMAS TURNS FROM OUTLAWS

Refuses to be Used as a Catspaw and Withdraws His Cars—Makes Known His Reasons.

E. R. Thomas, the Buffalo manufacturer who had the wool pulled over his eyes by New York's lovely and limited "Racing Trust" during the excitement incident to the return of the New York-Paris winner, has discovered the real truth of the situation and does not mean to be made an "outlaw" for the benefit of a crafty promoter who is working for his own pocket, nor to be used as a catspaw for a couple of importers who have little, if anything, to lose. The Motor Racing Association, which apparently was organized by, and chiefly for the benefit of T. Francis Moore and Company, talked Mr. Thomas into entering a car in the coming 24 hours race at Brighton Beach, and Mr. Thomas surprised them more or less by promising to enter the self-same car that carried the flag around the world. Then when Mr. Thomas began to reflect that this Brighton affair is to be an outlaw meet, he soon changed his mind and announced that he would stand by the Three A's, enter a car in the Vanderbilt cup and let the Motor Racing Trust go to grass. If a Thomas car does perform at Brighton track on September 11 and 12, it will not be entered by the Thomas factory, nor authorized by Mr. Thomas. This manufacturer, a member of the A. A. A. racing board, who has done as much as any man in America, financially and otherwise, to promote racing and help America establish a name among the nations in international contests, is not a man to be deluded into any new fangled three-ring racing circus which is stirring up strife and creating trouble. Here is what Mr. Thomas said on Wednesday:

"All the Thomas cars entered in the 24 hours race to be held at Brighton Beach September 17 have been withdrawn for the reason that the E. R. Thomas Motor Co. cannot permit any of its cars over which it has the slightest control to participate in a race which has not received the sanction of the American Automobile Association, as it would disqualify our cars and drivers from all events outside of the metropolitan district.

"We believe that racing must be controlled by an authoritative body, and as the A. A. A. has been controlling racing for some years we see no reason why the conditions should change. In assuming this position I feel as if we voice the sentiment of the majority of manufacturers, without whose assistance races cannot be successfully run.

"Under instructions, H. S. Houpt has withdrawn his entries in the Brighton Beach race."

It is said that Mr. Houpt, who appears to be under the Moore "spell," will now enter a car on his own account.

Texas Lad Wins Long Race.

On Sunday, August 23, at San Antonio, Texas, A. Dehymel, a 17-year-old boy, driving a 40 horsepower Stoddard-Dayton roadster, won the 12 hours race on the three-quarters of a mile track, covering 429 miles. It was the first time that young Dehymel, who is an amateur, had ever driven in a track race and he beat a number of seasoned men, including Harry Van Tine, who gained second place with one of the Glidden tour Studebakers stripped for racing. Van Tine finished 14 laps behind the winner. George Robbins's Mitchell was the only other survivor in the field of half a dozen contestants.

Tire trouble was plentiful throughout the race, caused by the poor condition of the track, Van Tine and the winner burning up nearly a thousand dollars' worth of tires. There was considerable skidding on the continuous turns of the small track, which provided occasional thrills for the spectators, but no accidents occurred. The non-survivors dropped out at various stages of the game, making the race rather tame, until the last hour or two when Van Tine made a desperate effort to catch Dehymel.

Holding Court by Correspondence.

Correspondence school methods of administering automobile "justice" have developed in Pennsylvania. Charles Davis, of Wilkes-Barre, the manager of a local garage, received a letter from a justice of the peace in Ambler, Pa., declaring that the motorist had the day before exceeded the speed limit of the town and should therefore appear in court at a stated time. The recipient of the letter replied by sending $5 and saying that he was sorry that he could not appear at the time specified but hoped that the amount enclosed would be satisfactory. In response to this, he got from the justice a communication reading: "Your letter received to-day, including the sum of $5 in part payment of automobile speeding. The fine and costs are $12.50, so you will please send the balance by return mail and avoid a trip to Ambler." The next mail carried a check from Davis to the Ambler justice for $7.50 more.

Hartford Club Chooses Avon Mountain.

After some careful searching and argument, Avon Mountain, North Corners, Conn., has been selected by the Hartford Automobile Club as the most desirable place to hold its hill climb on October 17. A committee composed of H. P. Maxim, C. H. Gillette and W. C. Russell made an attack on this hill in automobiles a few days ago and came to the conclusion that it was "most promising." The mountain course set around with the wildest, most rugged scenery will make the hill climb picturesque indeed, while the chances for spectacular driving on the sharp turns are many.

INSTRUCTIVE TRIALS PLANNED

New York Dealers Program Dust, Smoke and Brake Contests—Horse-Drawn Vehicles to Play Comparative Parts.

Popular and instructive as dust and exhaust trials have been abroad for some time, the first of these to be held on this side of the Atlantic will take place in September, at which time various makes of American cars will have the opportunity of showing their desirable qualities in such refinements as freedom from offensive exhaust and smoke and the ability to move at speed without raising undue quantities of the road surface and scattering it over the scenery. Brake tests will also be held in connection with the trials, and, if possible, comparative demonstrations of stopping in rivalry with horsedrawn vehicles of different kinds.

Central Park, New York City, has been selected as the probable theater of procedure and the tentative dates chosen are September 23 and 24, the New York Automobile Trade Association being back of the project. For the dust trials a 200 yards course will be covered with fine crushed lime stone and dried leaves, and the cars will proceed over it at a pace set by a flag attached to an endless belt arrangement the length of the course, which will be operated in accordance with the readings of a speeding indicator fastened to its controlling mechanism. The judges will be influenced in their decisions not only by their visual observations, but by instantaneous photographs that will be taken of the cars as they whirl along. Not only the effects of the body and running gear construction in dust raising will be considered, but also the effects of different types of tires, the results with hard tires, partially deflated tires and the several styles of studded treads being noted.

After the dust trials, the course will be well wet down, and the exhaust trials held. As in the case of the dust tests, photographs will be taken. It is proposed in the braking tests to have not only automobiles but trotting horses hitched to light sulkies, light road wagons and business vehicles, and the superioriy of the motor cars in making abrupt stops when necessary will only be demonstrated by excelling the performances of the horses in the hands of skilful drivers. Both the police and the park departments of New York City have sanctioned the trials, and will lend all possible assistance to their success, as the data that will be obtained will have great value to them in their dealings with automobiles in general.

The exhaust trials, particularly are looked forward to by the police department as likely to show results which will justify the exclusion of smoking machines from the parks. Many owners have claimed that smoke is a necessary accompaniment of motoring.

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CONDITIONS FOR LIGHT CAR RACE

A. C. A. Outlines Its "Invitation" for American Support of Its Anti-American Program—Entry Fee $200.

After a meeting of the contest committee of the Automobile Club of America on Monday last, the firm of Mills & Moore announced the adoption of the rules and conditions for the light car race which as a sop for American manufacturers, the club added to its European program, which will be carried out at Savannah, Ga., in November next.

The minimum weight will be 950 pounds and the maximum bore on a basis of four cylinders has been placed at 3¼ inches. According to Mills & Moore, there was some discussion as to whether the bore should not be placed at 4 inches for a four cylinder car. It was found, however, that a 4-inch four cylinder bore would be too big in proportion for the average single cylinder and double opposed motor of to-day.

The length of the race has been placed at 200 miles, over a ten mile parallelogram which will be increased should there be more than 20 entrants.

The race will be run on Wednesday, November 25th, the day preceding the European event. According to the press agents, "this will insure an enormous crowd of spectators which would be impossible at any other date or place," but no diagram of explanation accompanied the statement.

The equivalent of bore for varying numbers of cylinders is as follows:

For four-cycle motors:

Of 8 cylinders.....2.65 inches of bore
Of 6 cylinders .....3.56 inches of bore
Of 4 cylinders .....3.75 inches of bore
Of 3 cylinders .....4.33 inches of bore
Of 2 cylinders .....5.80 inches of bore
Of 1 cylinder .....7.50 inches of bore

A provision has also been made for two-cycle motors, the bore on a basis of four cylinders being 3.18 inches, and for three cylinders 3.65 inches.

The entry fee for the race has been fixed at $200 for one car, $300 for two, $350 for three, and $400 for four cars.

"Rules" for Cross-Continent Contest.

Although it has already been frowned upon by the National Association of Automobile Manufacturers and by the American Automobile Association, the proposed stock car endurance contest from New York to San Francisco and back is still being cheerfully boomed by the New York newspaper which is championing the idea. Even a schedule and a set of rules have been formulated and published, providing for the start from New York on July 4th next, on a 49 days trip, the outward journey to be through Rochester, Cleveland, Detroit, Chicago, Omaha, Cheyenne, Ogden and Reno, to San Francisco, and after a 24 hours stay in the latter city, the return to be through Los Angeles, Goldfield, Ely, Salt Lake City, Denver, Kansas City, St. Louis, Cincinnati and Pittsburg to New York.

The rules have elaborate provision for the carrying of reporters, mechanics, spare parts and baggage, and stringent regulations as to repairs, replacements and running time, the whole mixture being flavored with generous sprinklings of phrases such as "if conditions permit," "if possible," "as frequently as practicable," and "in the good judgment of the contest committee." The contest was originally announced as a race, but the path of wrecked speed laws, smashed vehicles, and dead and wounded cattle, people and chickens that a speed race would leave in its wake presented a prospect that resulted in a radical modification to "endurance" contest.

Victorious Thomas En Route to Buffalo.

Buffalo has made elaborate preparations for the reception to the victorious New York-Paris Thomas car, which will arrive in that city next Saturday.

Before leaving for Buffalo, the car carrying Schuster, Miller, Montague Roberts and George McAdam, accompanied by some of the Thomas representatives, made a trip to Oyster Bay last Thursday, where the party was warmly received and congratulated by President Roosevelt at his residence. When the drivers were presented to the President, there was considerable mutual delight and when the Strenuous One saw the flag that had been carried around the world, he was proud of the boys. Mr. Roosevelt listened with great interest to Schuster's stories and anecdotes concerning the wild beasts encountered on the trip through Siberia, and seemed amused when the driver told him that the worst roads on the trip were found right in America.

Following this reception the car returned to New York, where an illustrated lecture on the great race was delivered by Orrel A. Parker at the Automobile Club of America. On Monday, August 24, the car set out for Buffalo, its native city, making stops at Poughkeepsie, Albany, Utica, Syracuse, and Rochester.

To Welcome the Olympian Athletes.

New York motorists, both private owners and those connected with the trade, are going to see to it that the reception to the victorious American Olympian athletes on Saturday next does not lack a glorious and spectacular aspect so far as the automobile is concerned. Nowadays no celebration is complete without a procession of motor cars to carry the honored ones and when the formal joyesse is tendered to the conquering heroes on Saturday, August 29, W. I. Fickling, chairman of the automobile division, will see that things are done with some class. He has made a general call for owners and dealers to donate the services of at least 75 cars to carry the athletes and committees.

KANSAS CITY HAS NO GRIEVANCE

Will Continue Affiliation with A. A. A., Despite "Colored" Reports—Has Withdrawn Only from the State Body.

Although the anti-A. A. A. press agents in New York have been indusriously sending broadcast reports that the resignation of the Kansas City Automobile Club from the Missouri State Automobile Association was proof of far reaching dissatisfaction with the American Automobile Association, the arrival of the truth from the West once more places the little band of eastern malcontents in an unenviable light. It appears that purely local reasons were involved; for though the Kansas City club is resigning from the State association, it states specifically that it will continue independent affiliation with the parent body. Its endurance contest next month also will be run under the sanction of the A. A. A. For some reason the treasurer and "chief worker" of the Missouri State Association, R. F. Britton, of St. Louis, has filed a protest against the Kansas City club's action. although in the same breath he claims that he is tired of his job and will hereafter work only for the St. Louis club.

Favors Foreign Routes for Glidden Tours.

Charles J. Glidden is credited with having radical ideas regarding the routes for future contests for the Glidden trophy.

"I believe that the tour of 1909 will be west of Chicago to Denver, and that in 1910 the trip will be made through England, with a possible tour of Europe in 1911," Mr. Glidden is quoted as saying. "The European trips will open the European markets to American cars and will do a lot of good.

"The western trip of next year goes through a territory which will provide great opportunity for development. The European trips to follow will give us an opportunity to show Europe what the American car really is, and altogether we have before us some interesting trips. The tour of this year provided opportunities for American cars and these opportunities were accepted, but the foreigners declined."

The Eagle on the Soup Tureen.

The disgruntled Automobile Club of America finally has accepted the design for the grand prize for the European road race which that New York club will conduct at Savannah, Ga., in November next. The design is by Tiffany and the artist was unusually apt in depicting the spirit of the occasion. The trophy takes the form of a rather deep soup tureen, on the rim of which is perched a disgusted-appearing American eagle, whose talons are entangled in a sprig of laurel and who holds in his beak a small laurel wreath which apparently he is making ready to drop into the soup tureen.

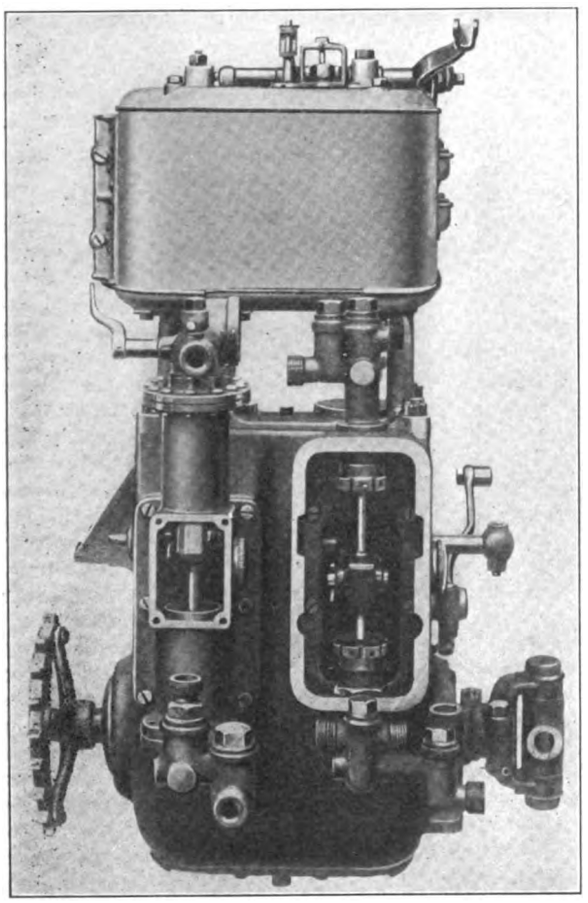
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WHITE ADOPTS A NEW ENGINE

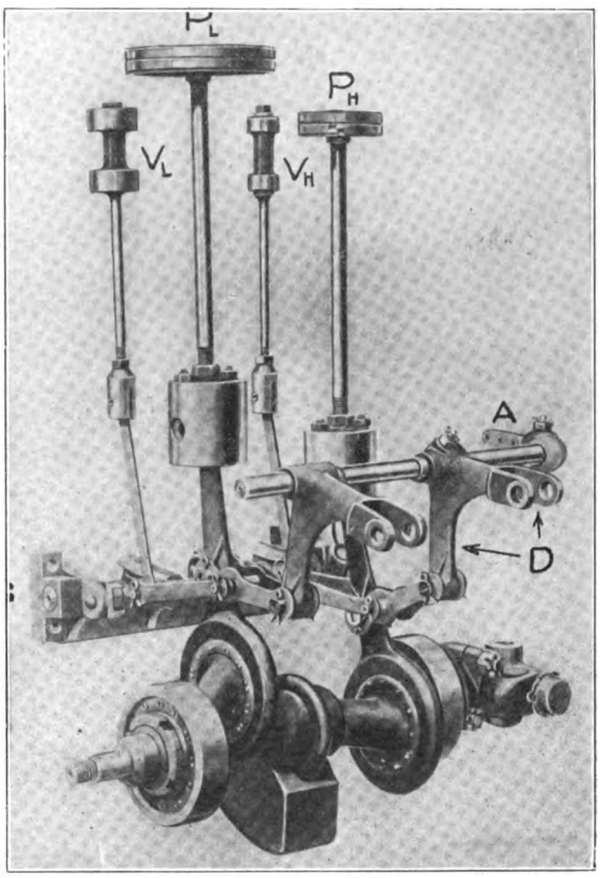
Famous Steam Concern to Depart Radically From Its Present Type—Other Features of Its 1909 Product.

As has been the case during the past two years, the White Company, Cleveland, Ohio, will produce two models of the White steamer for the 1909 season. Two new types have been perfected which will bear practically the same relation to one another as the models "K" and "H" of last year, but will differ in this respect that the smaller, which is to be known as model "O," will be essentially a duplicate in design of model "M," but of smaller dimensions and power. The power ratings of the two will be respectively 20 and 40 horsepower. In many respects they will resemble the cars of 1908 and 1907, this being especially true of the generator and regulating devices, which will be identically the same in detail as those of the models current. The engines, however, are of entirely new design, and present a number of features which are radical in automobile construction.

The characteristics of the larger car are: wheel base 122 inches; tires, 36 by 4 and 36 by 5 inches, respectively; body of the straight line, seven passenger type; frame, armored wood, reinforced with nickel steel plates; front axle tubular; springs, 44 and 55 inches long, respectively, front and rear; brakes of the internal-external type, acting on drums mounted on the rear wheels. The over-all specifications of the smaller machine are: wheel base 104 inches; tires, 34 by 3½ inches all around; five-passenger body; pressed steel, heat-treated frame; front axle of I-beam section; springs, 37 and 45 inches long, front and rear, respectively; brakes as in the larger car.

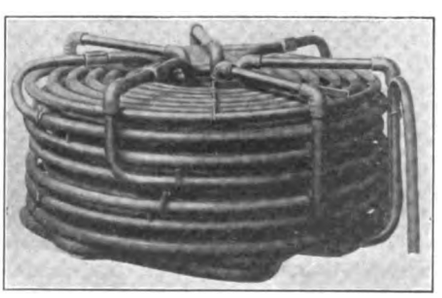


WHITE ENGINE SHOWING PUMP CASINGS UNCOVERED



CRANK SHAFT AND VALVE GEAR OF WHITE ENGINE

The generator, which, with its regulating devices, constitutes what is unquestionably the most efficient and compact producing plant ever devised for locomotive work, comprises merely a close coil of endless tubing of half inch internal diameter, in the present types, and, in the case of the larger car, holding less than one-third of a cubic foot of water and steam. The feed water, which has been previously heated by the engine exhaust, is introduced at the upper part of the system and flowing downward through the heated convolutions of the generator, issues from the superheating coils in the form of highly super-saturated steam. There is thus no great volume of either water or steam in the generator at any one time and consequently practically none of the danger attendant upon the handling of large volumes of steam under pressure. Also, the generation being practically instantaneous, there is practically no limit to its capacity under ordinary circumstances.



WHITE GENERATOR

A very essential requisite to the successful operation of such a system is the method of regulation. The heat supply at the burner, which is to say, the fuel regulation, and the water supply, must be governed in such a way as to produce a rate of water flow and steam generation sensitive and variable enough to satisfy the instant requirements of the motor in the way of power. This regulation is made absolutely automatic by the aid of temperature and pressure actuated devices which control the fuel and water supplies. By an ingenius system a perfect balance is maintained at all times, so that any rise or fall in steam pressure above or below the normal—such as must be caused when the car is stopped

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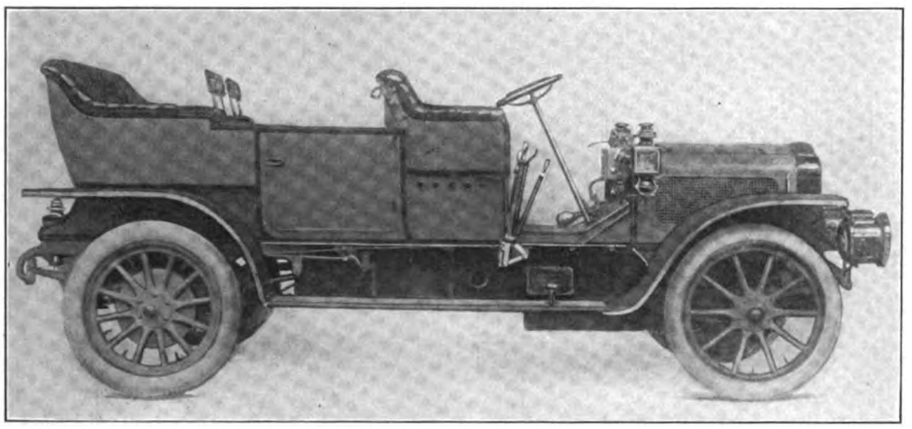
or started—is at once followed by alterations in the fuel and water supplies, calculated to compensate exactly for the change and hold the steam pressure constant.

The new engine, which like its predecessor, is of the compound condensing type, is considerably lighter, a great deal simpler, and correspondingly more efficient. Its most striking characteristic is the Joy valve-gear, which replaces the Stephenson link motion formerly employed. In this arrangement, the valve motion is derived from the connecting rods, from which links are taken to sliding blocks which travel in curved guides at one side of the engine casing. The valve connecting rods are coupled to this system at a point outside the guide blocks. The changes of cut-off and reversal of motion are obtained directly by altering the inclination of the guides, and the system is so designed that any alteration of the "cut-off" does not affect the "lead" of the valves, so that the engine runs as smoothly under these conditions as with full steam admission. The new arrangement does away with all eccentrics, and permits a reduction in the number of working parts of nearly one-half.

The accompanying illustrations show the moving parts of the motor grouped in their proper relation, as well as the exterior of the complete motor, showing the covers removed from the pump casings exposing the actuating gear. The method of connecting the pistons Pl-Ph to the double-throw crank shaft, the ball-bearing mounting of the latter, the actuation of the valves Vl-Vh, which are of the piston type with outside exhaust, from the guides, G, as well as the connection of the pump rocker-shaft D to the valve gear, are clearly indicated. The small arm, A, furnishes a driving connection to the oiler which is mounted on the dashboard.

The sprocket on the forward end of the crank shaft is connected by chain to the fan. A novel provision in this arrangement is that of a ratchet drive for the fan whereby the latter is permitted to spin for some little time after the motor has been cut out. As a result of this any reduction in engine speed is not directly communicated to the fan, and the draught is made more nearly constant than would be the case were the fan to follow directly the engine's fluctuations of speed.

The engine frame and casing are in one piece, but the enclosed parts are rendered accessible through cover plates. The crank shaft may be removed from either end. It has but two points of support, and the ball-bearings on the big ends of the connecting rods are so contrived that they may be removed over the ends of the shaft. The engine is supported on two cross members of the frame back of the front axle, and in such a position that the propeller shaft is perfectly horizontal.



WHITE MODEL M. 40 HORSEPOWER

The cylinder dimensions of the two types of motor used in the new models differ slightly from those employed in previous models. In the larger engine, the cylinder bores are, respectively, 3½ and 6 inches, instead of 3 and 6 inches, and the stroke is 4½ inches as before. In the smaller engine, the cylinder bores are 2⅓ and 4¼ inches for the high and low pressure cylinders, instead of 3 and 5 inches; and the stroke is 3 inches instead of 3½. As formerly, varying the cut-off and "simpling" are resorted to for heavy road and starting conditions.

Finality Nowhere in Sight, Says Coffin.

The idea that there is any near approach to finality or stagnation, is no part of the belief of H. E. Coffin, vice-president and consulting engineer for the Chalmers-Detroit Motor Co.

"There is no question but that there will be considerable improvement as time goes on in all types of motor cars," says Mr. Coffin, in discussing the subject. "The gasolene driven machine will be no exception. There will be, from year to year, betterments and improvements in many details. Our knowledge of the gas engine is still far from perfect. The steam engine we have had with us for the better part of a century and yet one can scarcely pick up an engineering journal without reading of some experiment or test which has developed new knowledge upon the subject. It is not reasonable to suppose, therefore, that the gas engine can, within ten years, become a perfect mechanism. Unfortunately, also, up to the present time men who have been most thoroughly acquainted with gas engine construction operation have been so busy along manufacturing lines as to be unable to devote much of their time and energy to the development of the finer points of the art. The well designed gas engine has reached a stage which we may term 'commercial perfection,' and we should use even this term advisedly and with reservation. The next few years will unquestionably see marked improvements both in the internal combustion motor itself and in its various accessories."

Where Prominence Has Its Drawbacks.

"It must be very fine to so predominate in your field of manufacturing that when anybody thinks of a 'steam car' they think of the White," said a prominent gasolene car manufacturer a few days ago to Windsor T. White, president of The White Company.

"It is a fine thing and yet there are times when we wish that the public would keep in mind that there are other makes of steam cars," replied Mr. White. "As you well know, in the early days of the industry, a lot of steam automobiles with ordinary boilers, were built by incompetent people. Most of these cars, of course, went to the scrap heap long ago. But every once in a while some one digs up one of these obsolete steamers and fixes it so that it will run. Sooner or later—generally sooner—something happens to this 'steam automobile,' and we are more than likely to get the discredit for it. For example, about two weeks ago an old Geneva steamer blew up near Plainsville, Ohio, with disastrous results. The published reports of the accident spoke of a 'steam machine blowing up' and some people who do not know our car and who, therefore, do not realize that such a thing is an absolute impossibility with the White, thought that one of our machines was involved. If these people had given any thought to the old crude steam cars, they would undoubtedly have placed the blame where it belongs."

One Firm Obtains Complete Monopoly.

By the terms of a contract recently closed with the government of Montenegro the firm of Laurin & Klement, of Jungbunzlau, Bohemia, is given a 15-year monopoly of the supply and operation of public motor vehicles of every sort, both for passenger and luggage transportation. By the terms of the agreement the firm is to open a postal motor service throughout the principality under a government subsidy. The outcome of the project will result in a vast improvement of communication between the Austrian port of Cattaro, and Cetinge, Niksic, Podgorica and other towns of Montenegro.

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MUST START PROMPTLY OR REFUND

Washington Strikes at a Trick of the Sight-Seeing Trade—Fares Must be Refunded on Demand.

Sight-seeing automobiles have had a regulation imposed upon them in the city of Washington, which if applied in other localities as well, will quite change the methods ordinarily employed in attracting customers. The district commissioners in the Capital have issued an order requiring sight-seeing automobile companies to refund immediately upon request the fare paid by any passenger whenever the automobile fails to leave the designated starting point within at least 10 minutes after the time announced for departure, and to refund the fare if the trip be not completed.

For some time it has been the practice of the sight-seeing companies to have cars standing at different points collecting waiting passengers until enough were secured to make one good load, when the victims would be gathered by the one machine and crowded together into a single trip. Alluring signs in white chalk about the next trip starting at such-and-such a time and the big machine standing apparently ready with plenty of desirable seats and lots of room to spare, would trick the innocent visitor into clambering aboard and figuring himself very lucky. But after waiting sometimes for hours after the time scheduled for departure and then being compelled to leave the car in which he was seated, to be crowded aboard another which would heave alongside already full, the visitor would often be exceeding wroth, but any efforts that he would make to get his money back would meet the derisive ha-ha. Complaints on this score grew to a point where the commissioners felt called upon to take action, the offense being one of long standing and one that is not confined to Washington.

In appearing before the commissioners in connection with a complaint of this character, F. W. Niles, manager of one of the companies, informed the authorities that he had not refused to refund the money, but that he told the aggrieved customers that the matter would have to take the regular course through the general offices in New York, just as in the case of refunds on railroad tickets. The new regulation will compel immediate cash adjustment.

Fire Chief Says Horse is Doomed.

In spite of the sentiment surrounding the much beloved, sugar eating fire horse, which is groomed and petted by the men of the department and admired by the public, the animal will have to give way to automobile fire apparatus, according to Chief James Horan, of the Chicago fire department, who expressed his views in a speech at the closing session of the eleventh annual convention of the National Association of Firemen, in Chicago last Saturday. The chief sees in the successful performance of motor fire engines, trucks and hose carts all over the country, the certain supplanting of the horse.

"The fire marshal now is, indeed, to be commended if his fire appliances of to-day are not ready for the scrap pile next year," said Horan. "We are living in a gasolene age, and all the mechanical engineers are unanimously of the opinion that the horse-drawn fire apparatus has seen its day. With the advent of the automobile it is apparent that the five ton engine and the seven ton truck, the two ton hose wagon and the chemical engine, will before many moons be things of the past, and the ever faithful horse, that eats its head off 365 days and nights of the year, must also be relegated to the historic past."

"Wreckers," and How They Work.

Cruising automobile "wreckers," which are nothing more or less than repair cars equipped with spare cans of gasolene, some tubes and casings of various sizes, emergency tools and towing ropes, are one of the latest developments along the most used motor car highways in and around New York City. They are on the lookout for machines that are en panne, and in some cases they actually follow a car for miles in anticipation of a breakdown, the likelihood of which has been made manifest by the sound of the mechanism or some external symptom.

Needless to say, the charges made by the experts of the cruising "wrecker" are sufficiently steep to make up all deficiencies growing out of the long waits between customers, and as the touring automobilists are generally heavy with cash, the cruisers are able to get liberal compensation for the work they do, exercising an acute commercial judgment in deciding whether the disabled machine can be repaired on the road with the tools at hand or whether a long tow back to the repair shop will be necessary.

Motor Wagons for French Army.

Automobiles will be used in connection with the commissary department of the French army if the request of the minister of war, who has asked the French Chambre Syndicate de l'Automobile to arrange to loan the army 80 motor trucks, is granted. It is desired to use the trucks during the forthcoming military manoeuvres in the Blois, Tours and Bourges districts.

Road Train for Russian Royalty.

One of the latest acquisitions of European royalty is a Renard road train, which has been put into the service of the Czar for the transportation of the baggage of the Imperial Court of Russia from point to point. The first train, which was purchased for the Imperial garage in May last, has proved so successful that a second is to be installed.

HAY DEALERS RECEIVE A WARNING

At Their Convention They are Told that Hay Market is Contracting Owing to Use of Automobiles.

A headline in a newspaper published in the city of Toledo, O., reads, "Autos Agitate Hay Dealers," from which one might infer that autos eat hay. This idea would be indeed erroneous, for while cars have been known to try to climb trees, dig up roots and herbs, plunge into shady pools and pluck pond lilies, and do other "stunts," subject to the weather's effect on their natures, no automobile has ever been known to eat hay, either dried or new-mown.

But out in Sandusky, O., nevertheless, the invasion of the automobile is giving the foremost folks of the hay industry veritable hay fever and is roiling them considerably. They held a convention and elected new officers and made speeches and things. Ex-President H. C. Morgan, of the National Hay Association, delivered a hot line of talk in an "ain't is awful, Mabel?" tone, when a timely discussion of the live topic of "The Automobile vs. the Horse," was in progress. Said he: "I want to warn you!" just like that—and then he proceeded as a hay dealer, to warn his fellow members that the market for low grade hay is disappearing with the increase of motor cars. "City folks," he declared, "are using gasolene buggies in place of the hay-fed eqyne!" and then he went further to state that while the market for high priced hay is improving, a new market for cheap hay must be found! New breakfast food factory accounts must be solicited, perhaps. All of which clearly goes to show what ravages the motor car can work.

On the other hand, the straw market doubtless will improve, for, not to mention straw bail, automobile straw rides are becoming fashionable. Around Deal, N. J., and Asbury Park, these affairs are finding much popular favor, so this may help to even up things.

To Curtail Use of High Power Cars.

As a result of the recent scorching and smashup of E. Russell Thomas, at Long Branch, N. J., other motorists will have to suffer. Commissioner J. B. R. Smith, of the department of motor vehicles of the State of New Jersey, has instructed all agents of his department to cease issuing licenses for cars of more than 65 horsepower. The Commissioner reserves for himself the right to grant such permits. This means that an owner of a Thomas "70" or any other high powered stock model touring cars, particularly six-cylinder machines, will have difficulty in obtaining licenses. It is understood that in most cases, according to the commissioner's plans, the high powered cars will not be licensed at all.

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MAYOR HAS A RED LIGHT SCHEME

He Would Have Warning Beacons at Danger Points—Thinks Life Insurance Companies Might Maintain Them.

The mayor of Providence, R. I., has a new "life insurance plan," as he terms it, which concerns motorists on Rhode Island roads. In his opinion, life insurance companies should contribute funds towards making the lives of automobilists safe on the highways. He is in favor of a movement to erect danger posts at hazardous curves and cross roads near Providence and elsewhere in the State, at the expense of life insurance corporations, or millionaire motorists.

"I would suggest," said he, "that numerous white posts be erected at the many danger spots, bearing large red signs that can be discerned at a safe distance from all directions, the posts to bear red lamps and be kept burning all night. The signs now in use are frail and placed so near the ground that many persons do not distinguish them from the ordinary real estate 'For sale' sign, until close arrival at the spot. Objection may be made to the cost, but if the pecuniary value of life could be computed, the expense could easily be subscribed by the millionaire auto owners as life insurance for themselves and the public. Life insurance companies might contribute for protection against the maturity of large policies carried by the rich, reckless auto owners. Such contributions would be good investments."

The mayor's plan is a good one, but it is difficult to fancy a life insurance company parting with any cash unless forced to do so.

Why He Willed His Money to Ballooning.

One of Jersey City's oldest inhabitants, the late Jeremiah Carihanne was no lover of automobiles and he carried his hatred even to the grave. The manifestation of his aversion for them in his last days was most interesting, for out of the ashes of his smouldering dislike, has arisen that which will benefit science, particularly as regards the perfection of vehicles of another sort. He willed his all to the cause of ballooning and aerial navigation, and gave his remarkable reason for it, too.

Upon his death, it was ascertained that Jeremiah was insured for $500. An envelope was found in his room containing his last will and testament, which has just been made public. After giving directions for his funeral, he wrote:

"Knowing from bitter experience what it means to be crippled from rheumatism and be forced to flee from the path of automobiles, I hereby bestow what is left of the insurance money on some man who is trying to perfect an airship, so that there will ultimately be less running about the streets and more flying through the air. I hereby appoint my executor as the man who will decide who is to get the money."

Edward R. Doyle is the executor and he says he will endeavor to carry out Carrihanne's request. The amount he has in his possession is $350.

Making Ready to Expel Scorcher Thomas.

In order to expel E. Russell Thomas, the New York banker, from the New Jersey Automobile Club, the trustees of that organization went to the trouble of calling a special meeting on Tuesday evening of this week. Thomas, who recently drove Harry Levey's 120 horsepower Vanderbilt cup racer on Ocean avenue, Long Branch, at a speed very near the powerful car's full capacity, and at a street corner struck a carriage, smashing it to splinters, killing a team of horses and injuring several people slightly and himself seriously, is at present confined to a sick bed. The club has given him eight days in which to make a reply to its action, and unless he chooses to demand a special hearing, he will be ousted at the next regular meeting of this club on September 14. Inasmuch as Mr. Thomas has repeatedly violated speed laws, a practice that this club is endeavoring to abolish in New Jersey, the members of the organization feel justified in demanding his expulsion.

Real Endurance Run for Kansans.

Elaborate preparations are being made by the Kansas City Automobile Club for its endurance run to be held September 20-30. The route has been outlined and Elliott H. Jones, with a party in a Studebaker car, are out doing the "pathfinding." The proposed itinerary starts at Kansas City, Mo., and jumps over into Kansas, then south via Wichita into Oklahoma, turning at Oklahoma City and running back to the starting place by a different route. The distance will be 875 miles, and the plan is to run about 125 miles per day. The contest will be conducted along the lines of the Glidden tour, with the agony of that event eliminated. The Kansas City Star will award a trophy to the winner. A. A. A. rules will govern the affair.

Denver Offers Half of Entry Fees.

As a special bait to attract entries for their 300 miles stock car race on Labor Day, the newly organized Denver Motor Club has announced that the contestant finishing the race in the short elapsed time will receive a prize amounting to one-half the total amount of entrance fees. This sum will be presented in gold coin and in view of the fact that there are already ten entries at $100 each, the club expects about as many more before the list is closed. The new Colorado organization recently affiliated with the Three A's and the coming contest will be run under A. A. A. sanction and rules.

"RESTRICTED LICENSES" BY MAIL

Massachusetts Unbends Slightly in Its Attitude Toward Non-Residents—How the New Scheme is Operated.

The Massachusetts Highway Commission has solved a problem in connection with licensing non-resident drivers, which is said to be working satisfactorily. Until recently, there has been much trouble experienced by motorists desiring to tour through Massachusetts, owing to delays and red tape incident to registration.

Most of the trouble in such cases was in getting to a place to take out a license without being caught by a policeman and hauled up for not having the license. The commission, under the law allowing it to place restrictions on registrations has now decided to issue certain licenses in response to application by mail, the license to become void unless the operator passes a Massachusetts examiner before the end of the stated number of days, as set forth in the preliminary certificate.

Under this arrangement, when a New Yorker or any other non-resident prepares for an automobile trip into Massachusetts, he will merely write to the commission giving a brief statement of his plans and qualifications. In response the board will send him a "restricted license," on authority of which he will enter the State with his car and operate until he takes the examination. If he passes, the license will be perpetuated, otherwise not.

Kentucky Has Visions of a Motordrome.

That Blue Grass State, which for years has been famed for its love of equine sport, has recently manifested some interest in motor racing at Lexington and elsewhere. In fact, if the ideas of Congressman Joseph Rhinock, president of the Latonia Jockey Club, Vice-President Harvey Meyers, and John J. Ryan, the former track plunger, take shape, Kentucky will become a center of motoring interest, for the three men propose building the first oval track in America exclusively for automobile racing. They contemplate having a saucer constructed along the lines of the Brooklands course in England, that will be 1⅝ miles around, with the turns banked to permit high speed. It will probably be erected on the shores of Licking River. Regular automobile meetings will be held and purses hung up similar to horse races and from the plans laid out, these purses will be of such alluring denominations that the fastest machines and best drivers in the country will be seen there within the next year or so—all of which, however, is in the nature of counting chickens a very long time before they are hatched. Several hundred motordromes already have been constructed—in American imaginations.

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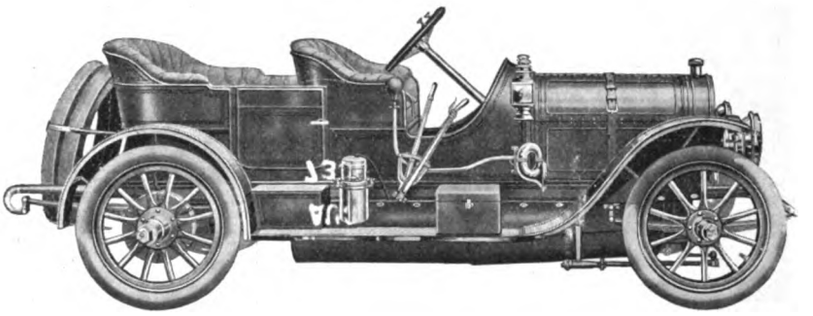
NEW FEATURES OF POPE-HARTFORD

Many Refinements in 1909 Models—Novelty in Brakes, Clutch and Torque Rod—Striking Body Designs.

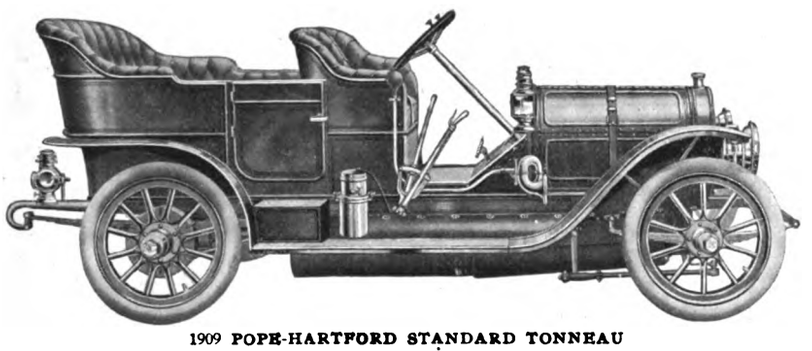
Following the same general lines as those of its immediate predecessors, the specifications of the Model "S" Pope-Hartford car, which is to be the 1909 product of the Pope Mfg. Co.'s Hartford (Conn.) plant, have just been announced. Embodying as they do several new and improved structural details while retaining the qualities which have proved most satisfactory up to the present time, the machine seems destined to become a worthy successor to those which have made an undeniable mark in the field during the past two years.

Certain of the characteristics of the 1908 model are retained exactly, or with slight modification. Thus the armored wood frame, the power plant being mounted on a pressed steel sub-frame, is retained, with the slight exception of a new form of rear spring hanger. The so-called "goose-neck" type is now to be employed, its requirement being in part, the use of longer springs than before, the rear suspension members being 56 instead of 52 inches long. The springs are now swiveled upon the rear axle tubing instead of being perched in fixed relation to it, thus allowing for any possible tilting of the torque and drive groups as might result from excessive braking or driving strains without straining the spring connections. The overhead valve type of motor is retained, though in entirely redesigned form, and the characteristic radiator profile remains unchanged, despite an alteration in the construction of the hood. The latter in the new model will be made without doors, will be straight sided, instead of having the double curvature of the sides, and will have a new method of attachment. Similarly the mud guards follow the lines already used, but with the addition of leather splash guards between the fenders and the frame line. In body design an entire alteration has been made.

The new touring body is of the straight line type, is much roomier than that of the Model "M", having 4 inches more floor and 1½ inches greater width and depth of seat. The straight type of dash has been adopted, and the finish and trimming is of improved form. Two variations in body design are made possible by the design of runabout and "pony tonneau" bodies, both also of new construction. In the former, the engine is mounted farther back than in the touring car, necessitating some slight alteration in the details of the transmission, and the steering column is given a greater inclination. This, coupled wth the increased length of hood, gives a totally different appearance to the machine from that of the touring model, although its wheel base is the same. The second variation is made possible by the use of a very light, low-backed tonneau body, the rear seat of which is placed well forward to give room at the back for tire irons and other equipment. The mounting of the dash is the same as in the case of the runabout, while the lines of the body may be described as a condensed version of those of the touring car proper.



1909 POPE-HARTFORD WITH PONY TONNEAU

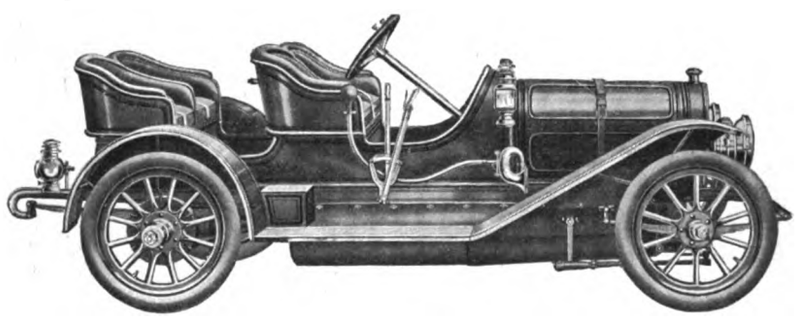


1909 POPE-HARTFORD STANDARD TONNEAU

In the power plant, a complete overhauling of the design has resulted in a number of minor improvements and the introduction of several features which are of striking merit. The motor, which like that of the Model "M" car is rated at 30 horsepower, has cylinders which are similar in form to those employed on that model, but mounted in the reverse position. Thus the exhaust is now on the right side of the machine, together with the oiler and water pump—both driven by a line shaft from the forward gear housing, while upon the opposite side is the carburetter, while just forward of it is the bracket upon which the magneto is mounted. Adjacent to this is the timer shaft, which is vertical and driven from the two-to-one group by means of spiral gears. The timer is mounted on a substantial pillar and is raised sufficiently above the level of the crank case to be thoroughly accessible.

The forward end of the crank case has been changed so as to permit of the complete housing of all gears integrally with the main case, and their lubrication by oil baths, fed by the splash of the cranks. A new method of fan mounting also has been provided an ingenius provision for automatic tensioning of the drive being included. The crank shaft has been enlarged and all its bearings lengthened, and this, together with the adoption of special white brass bushings, combines to render the working of the engine at once more reliable and less subject to vibration. The cam shaft and all gears may now be removed without removing the engine from the frame.

The control mechanism leading from the steering wheel to the carburetter, timer and magneto, is neatly arranged in the form of telescopic rods, running across the case in front of the cylinders. The carburetter, which is given a particularly accessible location, is of entirely new design, though following the style used in the current models,



1909 POPE-HARTFORD WITH RUNABOUT BODY

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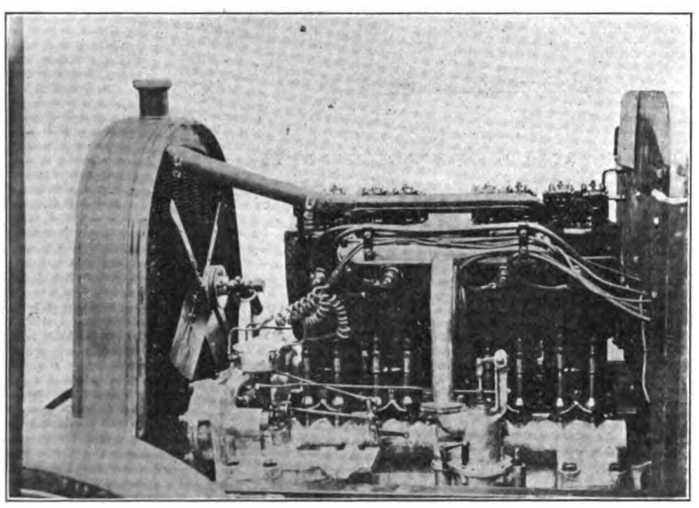
is of the central draught type, and has been worked out with special regard to facility of starting and freedom from flooding tendencies.

Altering the arrangement of the motor has involved a rearrangement of the piping, the new groups being of simple and unobstrusive form, and free from abrupt bends. The cam shaft is mounted on the left side and the rocker method of actuation by means of tappets and overhead arms is retained. The valves, however, are made larger, and with lower lift, in order to secure more silent operation and better freedom of movement for the gases.

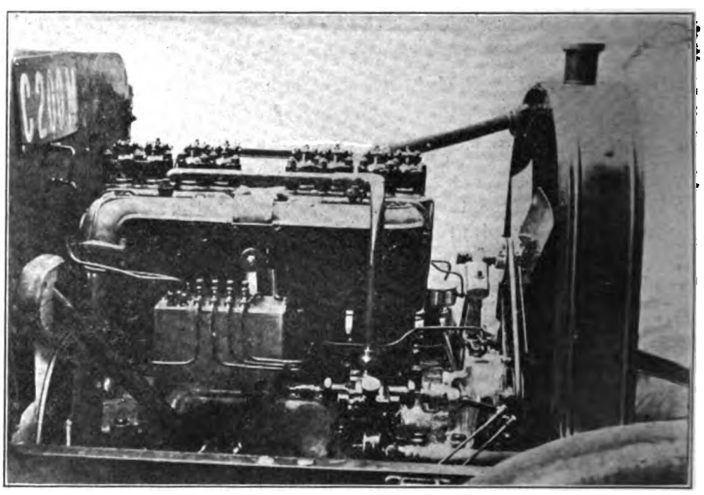
The transmission includes an entirely new clutch, which though of the plain cone type, as was used in the previous model, is of 1¼-inch greater diameter, and is given an entirely original mounting which is calculated to do away with any possible tendency to disalignment with the fly wheel, and to render the action of engagement perfectly even and gradual at all times. The manner in which this is brought about is worthy of special attention. An important feature of the clutch also is the provision for adjustment of any possible wear in the universal coupling which connects it to the driving shaft of the change gear.

The gearset, which is practically the same as that previously employed, is of the selective type and actuated in the conventional manner, all the controling mechanism being enclosed in the gear case. The propeller shaft carries the service brake just back of the case, this being of the contracting type and mounted on a pressed steel drum of 2¼ inches face by 12½ inches diameter. The propeller shaft is equipped with two universal joints and a slip joint—the latter at its forward end, and the rear axle group is of the full floating type, with hub-cap drive of improved and secured pattern. Enlarged Timken roller bearings are used in mounting the bevel gears, and a new method of adjustment is provided for the driving bevel, whereby in assembling an exact adjustment of mesh may be obtained, to secure the least possible resistance and noise in operation.

Except for the clutch and braking devices, the most unique feature of the machine is the torque resisting mechanism in which the usual torsion rod or stay is replaced by a tubular support of trussed triangular form, supported at its forward end by means of a ball and socket joint upon hinged bracket where it is cushioned by buffer springs. In order to carry this, a new tie member has been introduced in the frame, so that the rear gear case support no longer carries any but the dead load of the gearset. This new member, also serves a useful purpose in tying the sides of the frame together.

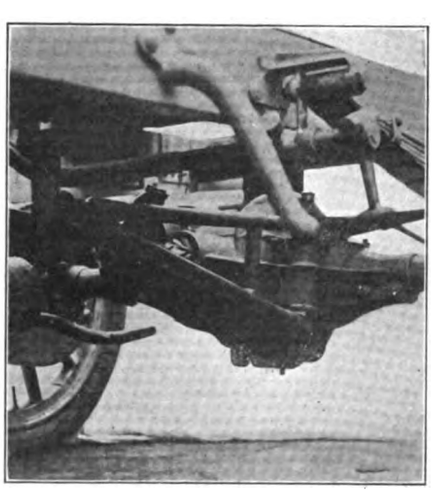


LEFT SIDE OF MOTOR, SHOWING CARBURETTER



RIGHT SIDE OF MOTOR, SHOWING OILER AND WATER PUMP

The rear end of the torque member instead of being rigidly attached to the differential housing, as is ordinarily the case, is swiveled to it by means of a vertical pin, the connection being provided—like every other part of the mechanism where motion is to be expected—with a grease cup. The effect of this is to prevent cramping in the member due to any side swaying of the frame on the springs, or due to any possible transverse movement in the rear axle such as might result from heavy skidding thrusts. The traction drag is taken by the forward ends of the rear springs, by which the fore and aft relation of the axle is preserved. With the swivelling of the springs on the axle tubing, and the absolutely universal attachment of the torque member, which, as indicated by the accompanying illustration, is very strong, despite its light construction, it is practically impossible to conceive of any possible spring motion to which the transmission will not adapt itself without distorsion and without interference with its proper function.



NEW HINGED TORQUE ROD

The rear wheel braking equipment is new, the retarding action taking effect through the hubs instead of the flanges, as is more commonly the case. The diameers of the drums have been increased to 14½ inches diameter, and are actuated by toggle mechanism of very powerful as well as positive action.

The Mounting of Outside Splashers.

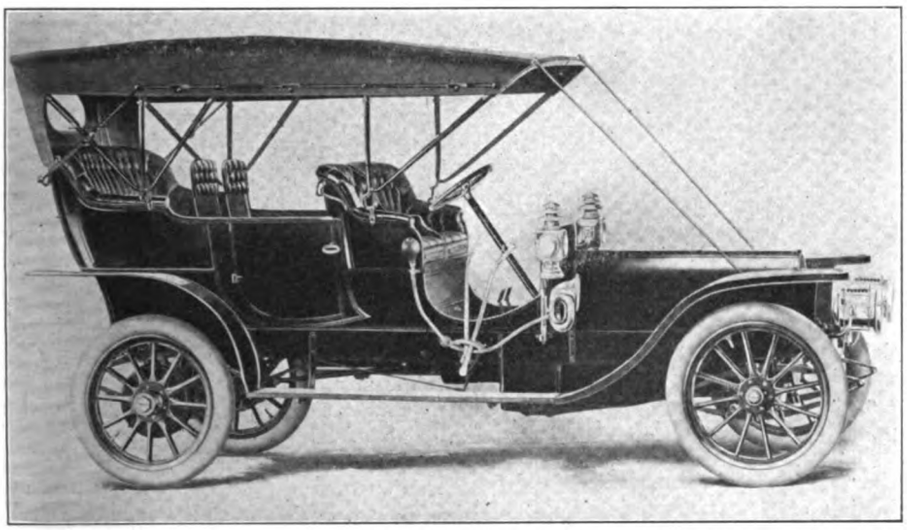
Consideration for appearances has led many drivers to mount splash guards on the inner side of the wheels of their cars, these taking the form of short curtains of canvas or leather to prevent the mud and water flying up on the under body and mechanism of the machine. Because of the axles, it has not been difficult to locate such devices on the inner side of the wheels, but until recently no simple method of applying similar guards to the outer edge of the wheels, for the benefit of pedestrians and other traffic, had been found. The protection of others from splashing which outside guards afford is possible of realization, however, as several devices of this character have been developed. In one type, the guard, which consists of a swinging screen of chain cloth, hangs on a plate with a bearing encircling the wheel hub. The bearing supports the floating plate, from the lower part of which the screen is suspended while the upper part is connected to the frame of the car with a long, yielding spiral spring, which holds it in position.

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NEWNESS IN THE 1909 FRANKLINS

Refinement Rather than Marked Changes the Rule—Governors and Battery Ignition are Eliminated.

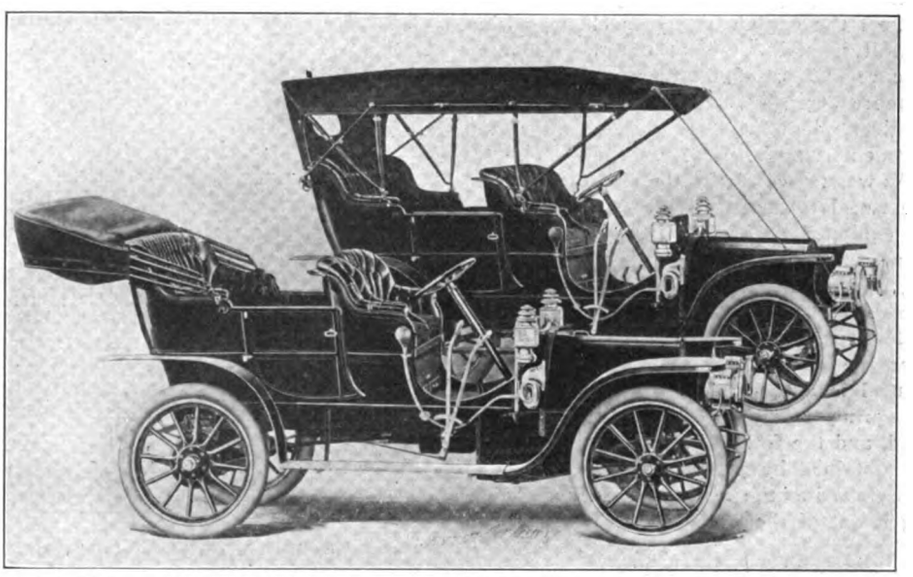
It is significant of the successful operation in actual service of that radical arrangement, the concentric valve gear, that it is to be embodied in the 1909 models of the Franklin cars, as in those of the present season. Another original feature which also is to be retained without material alteration is the auxiliary exhaust at the bases of the cylinders. Indeed, the characteristics of the new models which have just been announced by the H. H. Franklin Manufacturing Co., Syracuse, N. Y., are essentially the same as those of the models now in use. That does not necessarily imply, however, that the 1909 line will be without novelty, nor that it does not differ in a number of respects from that of 1908.



1909 FRANKLIN "SIX", 42 HORSEPOWER

The new Model "G" car, for example, is equipped with an 18 horsepower motor instead of one rated at 16 horsepower. Its dimensions are 3⅜ by 4 inches, bore and stroke. It is built on similar lines to the 28 and 43 horsepower, four and six-cylinder motors, but on a reduced scale. It is a slower running engine, fitted with a front air fan and is slightly reduced in weight. A small increase in wheel base has been brought about in this model as a result of the introduction of wheels of 2 inches greater diameter than heretofore. The wheels are now 32 inches in diameter, shod with 3½ inch tires. The body length also has been increased and is correspondingly more roomy and comfortable. The car is furnished with runabout, touring, landaulet and brougham bodies—the latter being similar in design to those employed on the 28 horsepower car.

Type "D" is the largest four-cylinder car in the line, and is driven by a 4¼ by 4-inch motor, as was the case in the previous model of the same power. Like that of the smaller car, it is equipped with Bosch high-tension magneto but is not furnished with the battery, coil and timer equipment which complete the "double ignition" system formerly employed. The wheel sizes on this model also have been increased by 2 inches, and now are 36 inches diameter. As equipped with the landaulet body, however, this model runs on 32 inch wheels, as being more suitable for town car service. The design of the regular touring and runabout bodies conform to the lines of the six-cylinder models, but they are lighter and smaller to match the lower power of the motor.



1909 FRANKLIN 4 CYLINDER, 28 HORSEPOWER

The six-cylinder model, which is known as type "H," which is the largest car produced by the Franklin Co., is made in three styles of body mounting, namely a seven-passenger touring car, single or double rumble runabout, and seven-passenger limousine. In this model also, is to be found a new type of steering gear, of original design, and of the worm gear type. It is designed to do away entirely with lost motion and replaces the bevel gear type formerly employed on this, and still used on the other models. The wheel base of this type is 127 inches, and its catalog weight is only 2,500 pounds.

Significant of improved methods of carburation is the fact that the governor which has been used on all models heretofore is done away with in the production of the 1909 types. In this connection it should be noted that a change has been made in the position of the carburetter by reversing it, thus adding to the hill climbing ability of the cars as well as improving their response to the demands of service. On the model "H" car, the crank shaft has been redesigned, and is now larger and stiffer than before. On this motor, also, the magneto action is governed by an automatic regulator which has expanding arms pressing against the periphery of the driving gear. The wiring, it should be observed, is led through protected conduits and is thus guarded against chafing and short circuiting as a result of external injury. Another improvement is in the arrangement of the front cheek piece, which may be removed without disturbing the cam shaft. The latter also may be dismounted without interfering with the cheek piece. The attachment of the starting crank has been made waterproof also, and is held in place by a leather stirrup. Several parts have been eliminated and others simplified as a result of doing away with the timer. The motors are thus lighter and otherwise improved in consequence of the "going over" which they have received.

As already indicated, the concentric valve construction which was introduced at the beginning of the present year, as well as the auxiliary exhaust which has been a Franklin feature for several years, is retained. The inlet and exhaust valves being superposed, a true dome-shaped cylinder

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is made possible, with the result that the area of the inner cylinder wall is reduced while the exterior and heat radiating surface is practically unaltered. In consequence of this, the cooling effect is increased. Because the inlet from the manifold is more direct than is possible with the more conventional method of cylinder formation, it also follows that there is less friction to impede the flow of the gas, and a larger charge can be taken in with the same valve area than otherwise would be possible. As the intake valve is well cooled by direct contact with the cylinder head, some little advantage is gained through the reduced expansion of the entering sea.

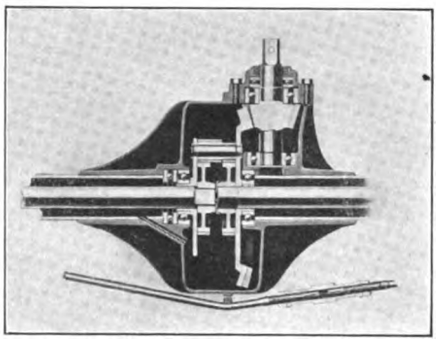
In the type "H" motor an improved method of suspension is employed. The cross rails of the frame are made of angle steel and also support the magneto and oiler in such a way as to reduce vibration to a minimum. Another new feature is the "double heat accumulator," which is used in securing the warm air supply for the carburetter. This consists of a jacket surrounding the auxiliary exhaust pipe with a leader running around and below the engine base to the carburetter, which is mounted on the opposite side. This intake jacket is purely an addition to the steel warm air collector used on the other models. A change in the style and position of the oiler also has been brought about. The Hancock, positive feed, gear driven device is now employed, and it is placed directly against the engine base in such a position that it is maintained at uniform temperature regardless of weather conditions. It is more accessibly placed than before, and is given plenty of free space, so that adjustments may be made readily.

As was the case with the previous models, the two larger cars of the new series will be equipped with selective type transmissions, and the smaller with the "self-finding" gear shift which already is familiar to users of this car. With the selective type of lever, the arrangement is such that whenever the vertical position is assumed, the neutral is automatically secured by means of spring tension. No gridiron plate is used, and the forward and reverse relations are obtained by pressing the lever inward or outward as the case may be when throwing it out of the vertical position. The arrangement of gears and connections is such that it is said to be possible to shift from one gear to another without declutching.

No spark lever is necessary to the control mechanism of the Model "G" cars, because of the automatic spark regulator. The spark levers used on the other two models, however, are retained in position by a new device, doing away with the ratchet arrangement used on the current models.

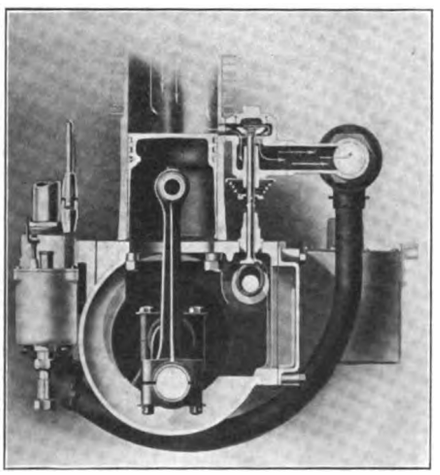
The use of an auxiliary fuel tank is another new feature of the forthcoming models. It is so contrived as to be filled automatically when replenishing the main supply, but cannot be used in the engine until the larger quantity has been entirely used. It is then necessary to turn a three-way cock located on the outside of the frame underneath the driver's seat. This also is an added fitting and supplies means of cutting off all fuel flow in its third position.

Among other alterations may be mentioned the use of Timken roller bearings in the front wheels of all models, the use



1909 FRANKLIN DIFFERENTIAL GEAR

of plain bearings on the steering gears, instead of ball bearings; the use of extensions on the front mud guards so contrived as to prevent the spattering of the motor through the grilled front of the hood; the lengthening out of the engine boot and the elimination of the transmission boot; and a slight change in the method of housing the differential in which rivets have been made to supplant bolts and nuts. Braking



FRANKLIN "DOUBLE HEAT ACCUMULATOR"

areas have been increased, and an anti-rattling device adopted, three-piece toe boards of cast aluminum have been installed, slight changes have been made in the method of constructing the tops, and many finishings which formerly were polished bright are now given a dull finish in assent to the growing demand for the elimination of tawdry trappings on the machine.

Draught Injures Body Finish.

Because the body finish on the average motor car proves to be of anything less durable than that of the average horse-drawn carriage, it is frequently charged that less care is exercised in finishing cars than has been the custom with carriage makers. As a matter of fact this belief, which is in many respects erroneous, fails to account for the extra wear which is brought upon the automobile body through the effect of the fierce impact of the dust and sand which is thrown up by the windage of the car. This takes effect most noticeably on the rear body panel, where the suction of the draught created by the machine itself causes a constant play of dust upon the finished surface. It is the same in its effect as the sand blasts of commercial application, and is charged with much of the same abrasive.

Why Sub-Frames Require Inspection.

In cars which have the power plant mounted on a sub-frame, it is essential that the position and alignment of the latter should be investigated carefully at each periodical inspection. If the frame is too light for its work, or is insecurely fastened, there is danger that it may warp out of line when unduly strained. Although it is customary to provide flexible or universal joints at all points which might be affected by such a disarrangement, the result throws an abnormal amount of labor on the parts of the joints, and causes an extra amount of friction on the transmission producing loss of power. Besides this, the condition may indicate a dangerous weakness in some quarter.

One Cause of Short-Circuiting.

It is quite essential that the fiber racks which are so commonly employed to secure the secondary wiring of the ignition system to the tops of the cylinders, be kept in good order as otherwise there is danger of the wires sagging against the cylinder heads and causing short circuits after the insulation has burned partially away. Difficulty in this quarter is especially apt to result when the wiring has been dismounted a number of times and the screws which hold it down have worn in their holes and become loose. When this is the case, new screws of a larger size should be substituted for the original ones.

How Threads Frequently are Stripped.

It is all very well to attempt to start a refractory nut by slipping a short length of iron pipe over the handle of the wrench. The practice should not be indulged in when drawing up bolts or nuts, however. Generally speaking, the average forked wrench is designed to give a safe leverage over the standard nut which it is made to fit. Increasing the leverage over this amount, and so increasing the pressure brought to bear upon the nut, is almost certain to strip the threads.

Where electric lamps are used for the dash and tail lights of the car they should be wired in series. By this means an effective indication is secured to show whether the rear light is burning properly.

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ABOUT FILLING ORDERS FOR PARTS

Apt Illustration of the Immensity of the Task—System in Vogue in One of the Big Factories.

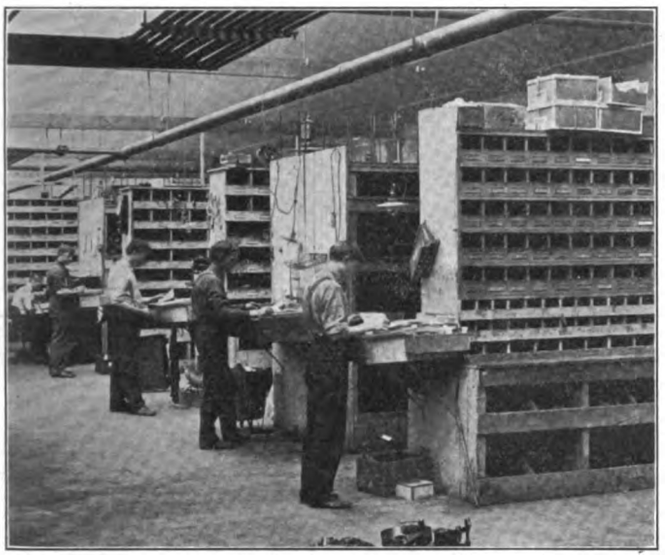
System and dispatch in the filling of orders for parts is now recognized as one of the chief necessities in the best equipped automobile factories, and though all manufacturers see the wisdom for the convenience and satisfaction of their patrons, few have developed the system which makes it possible to supply within 24 hours a duplicate of any part of any car ever built in that factory. Of the few is the firm of Thomas B. Jeffery & Co., who have on hand a duplicate of every part of every Rambler ever manufactured since 1902, and they make the claim that they can ship replacements on the same day the order reaches the factory. Such promptness is due to the organization of the sundry department. Orders are received by the parts order department and sent to the sundry department for filling. Here the parts ordered are inspected by two men to insure accuracy. Again, in the shipping room, the order is time-stamped and double checked to avoid mixing orders in packing. Parts of each and every piece ever used in any Rambler car are carried in stock; the manner in which they are stored and kept track of is shown by the accompanying illustrations.

The sundry department has 2,288 square feet of floor space and has 1,500 bins of various sizes, all arranged in sections 8 feet in height. In this room is found only such parts as are most frequently in demand, while in a reserve stock room, with 3,280 square feet of floor space, other parts are kept.

In addition there is the annex, motor stock, transmission stock and axle stock rooms, having a combined floor space of 5,210 square feet.

In the Rambler Parts List there are nearly 8,000 distinct parts, these covering, of course, all models built since 1902, a fact which conveys an idea of the immensity and comprehensiveness of the system.

The fact that there are 14,000 Rambler cars in use, many of them now in their fifth and sixth year of service, makes the equipment of this department very valuable to owners, while the fact that all Rambler parts are made in the Rambler factory enables this company to sell repair parts at astoundingly low figures. Although repair parts may not be needed during the first or second season of operation, this company sees the wisdom of manufacturing and keeping on hand extra parts of all models so that in years to come owners may procure them without delay and at reasonable cost.





TWO VIEWS OF STOCK ROOM AT RAMBLER FACTORY

Scavenging the Motor While Driving.

When driving on open roads no possible opportunity should be lost of scavenging out the cylinders by closing the throttle on down grades and permitting the machine to coast while pure air is drawn into the cylinders. This cools and cleans them at the same time, besides, in the more modern type of cars, providing a slight economy of fuel. The eager rush of the motor after the scavenging period is sufficient proof in itself that it is a beneficial practice.

When an Old Motor Becomes Cranky.

A frequent source of annoyance in the running of a motor which has seen considerable service arises from the lost motion between the connections of the throttle and ignition levers and subjoined parts. In most cases this may be corrected by inserting a tension spring in some portion of the system in such a way it will keep the parts constantly drawn in one direction. Any slackness of the joints will thus be obviated.

ADAPTING AUTOGENOUS WELDING

Brooklyn Man Develops System Using Ordinary Gas and Atmospheric Air—Results of Tests.

As a process approximating the oxy-acetylene method of autogenous welding, but having advantages in economy by the use of ordinary illuminating gas and atmospheric air instead of tanked oxygen and acetylene, a new system, the invention of A. K. Schaap, was given a demonstration last Friday at the garage of the Schaap Automobile Co., Brooklyn, N. Y. The heat attained under Schaap's system is claimed to be in the neighborhood of 4,500 degrees and is sufficient to weld or cut metals much as the acetylene flame does. Like the oxy-acetylene system, the application of the heat can be confined to the area to be treated.

While the use of gas with air under pressure is not altogether new, Schaap's method presents novelty in that the gas and the air have a preliminary mixing before being conducted to the burner where the final combination of air and gas is made. There are thus two points at which the air is carburetted with the gas. In one combination the air is used at a pressure of about one pound while in another it is used at 30 pounds. The gas is used at the pressure at which it ordinarily comes from the meter, which in the case of the tests was something over an ounce. In the course of the demonstration Schaap showed how quickly his flame would cut through an inch thick steel plate, and perform welding and cutting wonders under water. The inventor does not claim to be able to attain as high a heat as with the acetylene flame, which is in the neighborhood of 6,300 degrees, but is satisfied that it is sufficient to meet all ordinary requirements.

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Mathematics for Minneapolis Climb.

Saturday, August 29th, is the date that motor enthusiasts of Minneapolis, Minn., have decided to hold a climb on Columbia Heights, or another suitable location, and plans for running it have been announced. Cars will be divided into seven classes and the winners in five of these will be determined by formula in a manner similar to that employed to decide the various events at the recent Algonquin hill climb, run by the Chicago Automobile Club. This arithmetic-involving calculation calls for the following rule: Cylinder capacity of the car multiplied by the time in seconds, divided by the weight of the car with driver. When this result is obtained, the contestant having the lowest percentage is the winner. The vagaries of this formula are amusing, as results of the Algonquin climb showed that in some cases the lightest car in a class had the advantage, while in others, the heaviest in the group did better than the light-weights.

Zust Drivers Catch a Trolley Tartar.

The Zust competitor in the New York-Paris race is still doggedly fighting out the battle in a "Paris or bust" spirit and during a stop last week at Kazan, a city located somewhere within the bounds of the Russian Empire, the drivers indulged in a glorious trolley ride for a change. Scarfoglio, the "war correspondent" on the Zust car, wired from Kazan as follows:

"The treacherous sun has forsaken us. For the last four days the sky has been shedding all its tears upon the Zust car and its crew. The Russian roads are bad enough normally, but this persistene rain has made them worse than ever.

"Nevertheless we feel we are nearing Paris, our goal, and so speed on day and night. We arrived here at dawn today, and intend to start again at noon. Barring accidents we shall reach Nijni Novgorod to morrow night, Moscow the day after, and St. Petersburg soon afterward.

"While the mechanics were rapidly overhauling our motor we gave ourselves up just now to the glorious delights of a ride in an electric tramway car. In our enthusiasm we wished to embrace the conductor, but he was a Tartar.

Evidently the Zust drivers do not relish Tartar sauce between meals.

Doing One Hundred Double Centuries.

Two hundred miles a day for 100 days is the tall order that a Chalmers-Detroit "30" has undertaken to fill, and already it has delivered two weeks of it. Four times a day the machine makes the round trip from Detroit to Pontiac, Mich., and as the cities are 26 miles apart, the two morning and two afternoon journeys total over 204 miles. After 2,800 miles the car gives every evidence of completing its 100 days in a fashion that will prove its capacity for road service.

Race Meet for the Twin Cities.

Enthusiasts among the members of the Minneapolis (Minn.) Automobile Club are hungry for some motor racing and have secured a sanction from the A. A. A. to hold a race meet on Saturday, September 5. Several entries for the card have been assured and the club expects the local gasolene lovers to turn out in quite a mob. The following races have been scheduled: One mile, free-for-all time trials; five miles, gasolene stock chassis, 60 horsepower and under; 5 miles, Twin City championship for fully equipped stock cars; 5 miles, free-for-all, best two out of three heats, not more than two cars to compete in a heat; 25 miles, gasolene stock chassis, 60 horsepower and under; 5 miles, open to gasolene cars selling under $1,250.

Louisville Selects a Race Date.

Advices from Kentucky state that the Louisville Automobile Club has definitely decided to hold its race meet in that city on September 12 and that George Salzman, with a six-cylinder Thomas will be the drawing card of the affair. The club is endeavoring to promote the sport in Louisville and some of the foremost citizens are on its racing committee and are assisting the movement.

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FAVORS ELECTRIC OMNIBUSES

Discussing the Situation in London, Bernard Hopps Concludes Storage Batteries Offer Best Solution.

Motor omnibusses and their operation have proved a fruitful topic of discussion for British engineers during the past year or two, owing to the peculiar combination of circumstances which have governed the performance of these machines on the streets of London. The latest contribution to a long series of technical papers on the subject is by Bernard Hopps and was delivered before the Rugby Engineers' Society. After reviewing the causes which led up to a number of financial disasters in this line following a year or two of apparently successful operation, the author announces that present conditions are such as to offer inducements to promoters to introduce still other companies into the public motor vehicle service.

"There are today over 900 motor 'buses in London, 85 per cent. of which are owned by the three principal companies," he remarks. "Many of the 'bus companies in London are at present handicapped with a fleet of more or less obsolete vehicles, which they cannot sacrifice owing to the enormous capital expenditure they represent, and yet which cannot be run at a profit owing to the heavy maintenance charges. How long this condition of affairs will last it is difficult to say. The present vehicles cannot run for more than a few years before they will be reduced to scrap value, but in the meantime these companies are apparently not in a position to consider the purchase of new vehicles.

"There seems to be, therefore, at the moment, an opening for new 'bus companies in London, who would have for their guidance the valuable experience that the older concerns have bought so dearly. They would not be handicapped with obsolete vehicles, but, on the contrary, would have the advantage of acquiring up-to-date machines, specially constructed to meet the service conditions in London, and designed from the experience that has been gained. By the employment of only one type of vehicle the running cost would be materially reduced and the whole system of maintenance could be greatly simplified.

"The question arises what is the most satisfactory type of vehicle for service conditions as obtain in London? The available systems may be summarized as follows: Steam; petrol engine with mechanical change-gear, with hydraulic transmission, or with electric transmission; and electric drive with accumulators.

"Of the above systems two have been extensively tried in London service, i. e., steam, and the petrol engine with mechanical change-speed gear. . . . For net loads of five tons and upwards, it is generally admitted that steam is the more satisfactory; on the other hand, for loads of two tons and less, the petrol engine has the advantage. For vehicles carrying loads between the limits of two and five tons, in which category may be classed omnibusses, the relative advantages of the two systems is a debatable subject.

"As regards the petrol-hydraulic system, several schemes have been proposed, some of which have been tested, but, as far as the author is aware, this system has not been subjected to a prolonged service trial on a London motor 'bus, and therefore little can be said of its practicability for that class of work.

"With the petrol-electric system it is proposed to deal in greater detail, as here more information is available. During the past few years considerable attention has been paid to this form of transmission, and several systems have been placed on the market. In studying these it must be remembered that the first aim in designing a 'bus for London service should be to reduce everything down to the simplest possible form. The electrical equipment must be self-contained and sturdily built. It must be so simple that it can be taken to pieces and re-erected satisfactorily by an ordinary fitter, who has no electrical training, for it must be borne in mind that the average motor 'bus mechanic is necessarily more skilled in matters pertaining to the petrol engine than to electrical machinery.

"Petrol-electric systems may be roughly grouped under the following headings: (a) Those which start and accelerate electrically, after which the electric drive is cut out and is taken up by a clutch driving direct through from engine. (b) Those which employ accumulators to assist the engine in climbing grades. (c) Those which drive entirely electrically.

"It is claimed for the first method (a) that since the electrical equipment is only used for starting and accelerating, it can be made comparatively smaller, lighter and cheaper. This is an erroneous idea, as it is not practicable to limit the output of the electrical equipment to starting and acceleration duties only, since occasion will arise where hills of considerable length must be negotiated, the gradient of which will be too severe for the direct drive, and which, therefore, must be climbed entirely through the electrical transmission. Since such grades represent the most severe duty for the electrical equipment, it follows that in order to avoid over-heating, it must be made just as large and heavy as would be necessary were it called upon to propel the vehicle during the whole of the working period.

"It may be said that for service in our large cities, as, for example, London, the grades encountered are insignificant and can be surmounted with the direct drive, but for this class of service where traffic is always congested, and where constant stops and starts are necesary, there is no real advantage in employing a direct drive to decrease the duty of the electrical equipment, since it cannot be used for sufficient length of time.

"It is further claimed for this system that the so-called direct drive at full speed is more efficient than a purely electrical transmission. Assuming that this is so, and that a few per cent. saving in efficiency may be obtained owing to the elimination of the electrical losses, which at full speed, however, are at their minimum, this arrangement introduces a clutch, which complicates the mechanism and adds another item of upkeep. It also necessitates the alignment of the motor, generator and engine. It limits the speed of the motor to that of the engine, whereas with a purely electrical drive, the motor can safely be run at double the speed of the engine with a corresponding saving in weight and cost.

"With regard to the second system (b) in which accumulators are used to assist the engine, it is somewhat difficult to see what advantage is obtained by their introduction; they add a complication, and require a special organization to attend to them. The accumulator usually employed is the Planté type, which it is true will withstand a considerable amount of abuse both as regards heavy discharges and vibration, but the battery required is as heavy, and as costly as an electric motor would be, and far more expensive in upkeep. The simplicity of the control is sacrificed, and a skilful driver is essential to operate such a system efficiently. For heavy country service in which steep hills have to be negotiated, the discharge rate on the accumulators is high, and there is the possibility that they may become totally discharged before the top of the hill is reached. The only advantage that can be claimed for such a system is that of recuperation during the braking and coasting periods.

"There remains the third system (c), the pioneers of which in this country were the British Thomson-Houston Co. This consists of a direct-current dynamo driven by a petrol engine, the whole of the engine power being converted into electrical energy, which is transmitted through a controller to the motor or motors driving the road wheels.

"In this system, either one or two series-wound motors may be used, depending on the nature of the service. For vehicles in London, the single motor with a single commutator is to be preferred, on account of reduced weight, cost, and simplification of the controller, although it necessitates the retention of the differential gear; for hilly country work, the double motor equipment, or its equivalent, is essential.

"The chief feature of this system is the constant watt output auto-regulating dynamo, which reduces the control to its simplest form, and thus renders the employment of skilled drivers unnecessary.

"In order to fully appreciate the advan-

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tages of this machine it is necessary to study the characteristic of the petrol engine that drives it. The maximum horsepower that can be developed by a petrol engine is limited to practically its normal working output. The torque developed remains approximately constant; it follows, therefore, that as the speed diminishes, due to overload, the horsepower developed diminishes, and this at the time when the maximum brake horsepower output is most required. In this respect it is unlike a steam engine, which can be made to develop considerably more than its normal torque for short periods by increasing the cutoff and the steam pressure.

"In the case of a gear-driven 'bus of the usual type, in order to provide sufficient torque at starting, it is necessary to introduce a comparatively large gear-ratio between the engine and the road wheels. It is small wonder the drivers become fatigued and careless at the end of a day's work, during which the gears are changed on an average of some 800 times in London service.

"The use of the auto-regulating dynamo eliminates the whole of this work and consequent fatigue, and its action may be described as follows:

"At starting, the motors demand a large current in order to develop the necessary starting torque; the dynamo supplies this current, but at a very low voltage. As the motors speed up they automatically demand less current, which is supplied by the generator, but at an increased voltage. In other words, the voltage of the generator varies in inverse ratio to the ampere output, therefore the power required to drive it can never exceed a certain predetermined maximum, which is arranged to correspond to the maximum power of the engine. Whatever the current demand may be from the generator, it cannot cause an overload on the engine sufficient to reduce its speed and horsepower output.

"Almost as important a feature in this system as the generator is the system of control, which has been reduced to the simplest possible form. In order to stop the vehicle the current is not interrupted at the main controller, but the voltage of the generator is reduced to zero by inserting a high resistance in the generator field, and at the same time reducing the engine speed. This is accomplished in practice by a single pedal. On releasing the pedal the first movement cuts out the resistance, and the generator volts build up on the load, causing sufficient current to flow to the motors to start the vehicle, which will continue to run slowly, the engine remaining governed at 400 revolutions per minute. On entirely releasing the pedal the governor is 'held up,' allowing the engine speed to at once increase to its normal value and the vehicle to smoothly and rapidly accelerate to its full speed. To slow in traffic it is merely necessary to more or less depress the pedal, thereby reducing the engine speed, and consequently the generator voltage and the vehicle speed.

". . . . In view of the favorable costs for running petrol gear driven 'buses that were quoted by leading authorities a few years ago, accumulator traction for this class of work was regarded as commercially impossible. Experience has shown that these costs were placed too low, and that the petrol 'bus costs at least 25 per cent. more to maintain than was at first anticipated. The 'bus companies admit the present vehicles give an enormous amount of trouble to maintain, and that the cost of maintenance is a variable one, depending largely on the driver. Skilled mechanics will not undertake the duties of a 'bus driver, and the men who are employed are usually at a loss to rectify small derangements of the engine, etc., which often occur on the road, and therefore it is necessary to employ a staff of road adjusters, who are stationed along the routes to render skilled assistance in cases of breakdowns.

"In the light of the experience gained with the petrol gear-driven 'bus, the prospects of accumulator traction are much brighter. The accumulators themselves have been improved in detail, and accumulator manufacturers are now prepared to enter into contracts to maintain the accumulators at a flat rate per car mile, which at once relieves the operating companies of all anxiety as to the cost of their upkeep."

Young Thief Emulates the Flea.

Writers of dime novels have justification for the exploits recorded in their "thrillers" in the bold career of Ernest Diebler, a Chicago youth, who after being arrested for stealing a $3,000 touring car from the Haynes Automobile Co.'s Chicago store, escaped from the officers of the law and stole the same machine over again, this time from the police who guarded it and in whose custody it was held. After a long chase he was captured the second time but escaped once more by jumping through the window of the railway car in which he was being taken from Seattle back to Chicago The girl for whom he is said to have stolen the machine lives in Portland, Ore., and a close watch was kept for him in that city. The youth finally turned up and was again arrested, but he told such a plausible story about being E. W. Smith and not the man sought that he was released. Telegraphic urgings from Chicago to hold him for identification were received shortly after, however, and before he could leave the city he was taken to jail once more. How many times he will escape and steal the automobile remains to be seen.

Oil-Soaked Pavement Causes a Fire.

"Burning up the road" has a new significance in Chicago, following the exciting incidents of a pavement fire which this week scorched several automobiles and gave the women passengers the scare of their lives. At Clarke and Monroe streets, where many machines were lined up in front of Rector's restaurant, the gasolene and oil drippings of the season had saturated the wooden paving blocks to a point where they only needed a flame to ignite, and this was supplied by a smoker who after lighting his evening cigar tossed the burning match into the gutter. Instantly there was a flare which illuminated the whole street and the fire swept the road surface in leaps. It licked the varnished tonneaus and frizzled the tires of the cars along the curb, and precipitated a general scramble on the part of the passengers to get out and the chauffeurs to move their charges away from the flames. Patrons of the cafes and restaurants ran out and added to the tumult, while the fire department came at a gallop. Because of the floating oil and gasolene, water was not used and the fire was smothered out with pails of sand and the spreading of tarpaulins. No explosions or serious damage took place, but the conflagration points to a very plain lesson for garage owners in particular.

Possible Markets for American Cars.

According to Consul James Johnston, of Algiers, there are good prospects of a permanent market in Algeria for a light, strong, moderate-priced car. Automobiles are extensively used by wine and oil merchants who have to travel in districts where as yet the railway does not exist.

In order to introduce American motor cars and establish a market therefor the manufacturer must be prepared for a little expense, he says. The only effort that appears to have been made thus far in this direction has been to send catalogues in English, but it is unreasonable to expect to sell motor cars on the strength of catalogue descriptions, and no agent would entertain the idea of representing a line of automobiles unless he had a sample car for demonstration.

The duty on motor cars from the United States is 60 francs per 100 kilograms ($115.80 per ton of 2,240 pounds) on cars weighing 125 kilos and over. The duty on the same cars from other countries is 50 francs per 100 kilos ($96.50 per ton).

American Consul R. M. Bartleman, of Madrid, writes that there are over 700 automobiles in the Spanish capital, and a good market for more, including American machines, if they can compete with those now on sale. No American cars are now on the market.

Motor Cabs and Buses in London.

Consul-General Robert J. Wynne reports that a statement by the home secretary shows that there is now one motor-omnibus for every two horse omnibuses plying in the streets of London. The full statement of the number of licensed vehicles in London is as follows: Taxicabs 1,508, hansoms 5,329, four-wheeled cabs 3,768, motor omnibuses 1,046, horse-drawn omnibuses 2,281; total, 13,932.

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The Week's Patents.

889,267. Four-Cycle Motor. Alexander G. Spencer, Rahway, N. J. Filed June 28, 1906. Serial No. 323,953.

A four-cycle motor comprising a cylinder having in its side an exhaust port and at its head end an inlet for the combustion motive fluid and an inlet valve therefor, said end of the cylinder being permanently closed except for said inlet, a piston within said cylinder, a piston rod pivotally connected with said rod, said exhaust port and piston being in proper relation to each other to enable said piston to cover said port during nearly the whole of the suction and power strokes of the same and to uncover said port at about the end of the suction and power strokes of said piston, whereby on the suction strokes of the piston the said fluid is thereby drawn into said cylinder and on the conclusion of the power stroke thereof the products of combustion discharged wholly through said exhaust port then uncovered by said piston; substantially as set forth.

889,310. Drive Attachment for Vehicle Wheels. Joseph H. Joaquin, St. Louis, Mo. Filed May 14, 1907. Serial No. 373,688.

1. A device of the class described, comprising a cap, a flange formed integral with said cap, said cap placed over one-half of the hub and retained in position to the spokes of the vehicle by means of said flange, a second flange formed integral with the cap, an externally screw threaded shoulder formed on the cap, and a sprocket wheel removably attached to the cap, substantially as specified.

889,338. Igniter. George J. Schultz, New York, N. Y., assignor to Benjamin Briscoe, Tarrytown, N. Y. Filed Feb. 26, 1907. Serial No. 359,422.

1. In an ignition device, the combination with a shell having a central opening and carrying a plurality of sparking points, a body of insulating material located within the opening of said shell, but being of less area than said opening, sparking points carried by said insulating material for co-operation with the sparking points carried by the shell, said body of insulating material carrying a translucent flange of insulating material, and means for securing said flange to said shell.

889,362. Speed Changing Mechanism. Walter O. Foss, Philadelphia, Pa., assignor of four-fifths to George Link, Frederick C. Brunhouse, Philip G. Lang, and Ralph E. Brunhouse, Philadelphia, Pa. Filed Jan. 21, 1908. Serial No. 411,947.

1. A power shaft, an axle, a plurality of interchangeable power transmission mechanisms slidably mounted upon said axle, each mechanism consisting of a driving disc, bevel gear and clutch, and a clutch on said power shaft adapted to engage either of the clutches of said power transmission mechanisms, substantially as described.

889,402. Carriage and Automobile Body. Maurice J. Rothschild, New York, N. Y., assignor to Rothschild & Company, New York, N. Y., a Corporation of New York. Filed Sept. 16, 1907. Serial No. 393,001.

1. The combination with a frame or support, of a body covering or sheeting therefor, and a bar conforming to the shape of said frame and secured to said covering by permanent flexion of the edge of the latter.

889,432. Spark Plug. George J. Blum, Chicago, Ill., assignor to Armstrong-Blum Manufacturing Company, Chicago Ill., a Corporation of Illinois. Filed Feb. 7, 1906. Serial No. 299,933.

1. In a spark plug, in combination, an electromagnet; a fixed contact; a movable contact; a finger for carrying said movable contact; a sectional shaft between the sections of which said finger is clamped; and an armature clamped to said shaft.

889,450. Timing Device for Jump Spark Ignition Systems. William D. Foreman, Chicago, Ill. Filed July 5, 1907. Serial No. 382,226.

1. In a timing device of the character described, the combination with a rotary member and an adjustable stationary member provided with electrical contact pieces, of a brush carried by said rotary member, and a contact cleaner slidably supported on said rotary member to be movable relative thereto.

889,487. Carburetter for Internal Combustion Engines. Joseph C. Schneble, Dayton, Ohio, assignor of one-half to Theodore C. Schneble, Dayton, Ohio. Filed May 28, 1907. Serial No. 376,100.

1. In a carburetter, the combination with a cylindrical air chamber and a fuel nozzle located axially therein, of an annular air valve provided with a skirt from its central opening surrounding the fuel nozzle when the air valve is closed, a central needle valve controlling the opening in the nozzle, and rotating cams for operating the air valve and the fuel valve, simultaneously, substantially as set forth.

889,437. Power Drum Gearing. Charles F. Callahan, Pasadena, Cal. Filed Jan. 16, 1908. Serial No. 411,171.

1. In combination with the propeller shaft, a drum mounted transversely thereof, a gear at one end of the drum, a sleeve slidable on the propeller shaft, a pair of bevel gears on said sleeve, a yoke pivotally supported on the propeller shaft, a shaft journaled in said yoke, a gear on the latter shaft adapted to be engaged by either of said first named bevel gears, another shaft connected by a universal joint with the latter shaft, a rotating sleeve in which the last named shaft is slidably mounted, and a spur gear on said rotating sleeve meshing with the gear on said drum.

889,489. Shock Absorber for Vehicle Wheels. William E. Snediker, New York, N. Y. Filed March 16, 1907. Serial No. 362,670.

1. A shock absorber for vehicle wheels comprising a resilient cushion interposed between the main axle and its wheel, a stub axle bearing the wheel and a lever movable with reference to the stub axle and main axle and reacting against the resilient cushion.

889,528. Speed Controlling Mechanism for Automobiles. Thomas B. Jeffery, Kenosha, Wis. Filed Jan. 12, 1907. Serial No. 351,934.

1. In a motor driven vehicle, a motor for propelling the vehicle at various speeds, a motor controller, a speed indicator driven in time relation with said motor so as to show the speed at which the vehicle is traveling, operative connections between said controller and said indicator for causing the controller to be actuated upon variations in the speed, said indicator including relatively movable co-operative dial and index members located within reach of an occupant of the vehicle, and said latter members being so arranged that relative movements may be effected between them by such occupant.

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889,158. Carburettor. Horace T. Thomas, Lansing, Mich., assignor to Reo Car Co., Lansing, Mich., a Corporation of Michigan. Filed No. 13, 1905. Serial No. 286,993.

1. The combination with a casing of an air and a constant level float chamber formed therein, a hollow valve projecting within the air chamber and provided in its inner end with an air inlet port in constant open communication therewith and in its outer end with a discharge port communicating with an outlet from the casing under control of the valve, a seat for the valve provided with an opening, a hydrocarbon supply nozzle concentrically arranged in said opening, and means for rotatorially adjusting the valve, said valve adapted to be registered with the opening in the seat of the valve.

889,585. Tire Case. Lewis G. Cook, Detroit, Mich. Filed May 24, 1907. Serial No. 375,494.

1. In combination with the circular concaved body part of a receptacle, a half cir-

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cular concaved cover part hinged to said body part and provided with staples near its ends, a second half circular concaved cover part hinged to said body part and provided with holes adapted to engage over said staples, bolt members carried by said staples and adapted to be retracted within the walls thereof, a spring for projecting said bolt members and thumb latches for retracting said bolt members, substantially as described.

889,678. Shock Absorber for Self Propelled Vehicles. Charles B. Hatfield, Cortland, N. Y., assignor to Hatfield Motor Vehicle Company, Cortland, N. Y., a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,729.

1. In combination with the body and running gear of a vehicle, a motor on the body, an endless belt for transmitting motion from the motor to one of the traction wheels, a rock-arm pivoted near the axis of the wheel, a roller on the rock arm receiving and guiding the belt, and means for rocking said arm to press the roller against the belt with sufficient force to deflect a portion thereof from a direct line to resist upward thrust or rebound of the body of the vehicle.

890,533. Speed Regulating Device. Alfred P. Schmucker, Denver, Colo. Filed Jan. 8, 1907. Serial No. 351,329.

1. In speed regulating mechanism, the combination of a liquid containing reservoir, a driving shaft, a driven shaft, means located in the reservoir for circulating the liquid therein as the driving shaft is rotated, the said means including two co-operating members, one of which is eccentrically mounted in the other, and slidable means surrounding the outer member and independent of the shafts for controlling the exit port, whereby the passage of liquid therethrough may be cut off to any degree desired, for the purpose of regulating the speed of the driven shaft as compared with that of the driving shaft, substantially as described.

890,565. Change Speed and Reversing Gear. Charles B. King, Detroit, Mich., assignor to Northern Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed April 3, 1905. Serial No. 253,585.

1. The combination of a change speed mechanism having adjustable connections to secure different speed ratios and an adjustable connection to secure reverse motion, a rod adapted to slide longitudinally to shift the connections to secure different speed ratios and to rotate to actuate the adjustable connection to secure the reverse action, a second rod secured to the first rod so as to be free to change its position laterally, but restrained from rotation relative to the first mentioned rod, means for shifting the second rod laterally and longitudinally, said second rod being provided with a laterally extending arm, and means for restraining the motion of the outer end of said arm laterally to said rod whereby said rods are turned about their axis.

889,679. Self Propelled Vehicle. Charles B. Hatfield, Cortland, N. Y., assignor to Hatfield Motor Vehicle Company, Cortland, N. Y., a Corporation of New York. Filed Jan. 26, 1907. Serial No. 354,308.

In a self-propelled vehicle, a body and a running gear having a traction wheel, a liquid hydro-carbon engine mounted on the body of the vehicle and provided with opposed cylinders arranged transversely of the body, said engine having a crank shaft extending lengthwise of the body, a friction disc secured directly to the crank shaft and provided with a central floating rest concentric with its axis, the friction face of the floating rest being coincident with the remaining portion of the friction face of the driving disc, a shaft mounted transversely on the body parallel with the friction face of the driving disc, a second friction disc rotating with the shaft in permanent contact with the friction face of the driving disc and movable axially, means for moving said second disc axially in a diametric line across the face of the driving disc, and means for transmitting motion from the shaft to the traction wheel.

889,769. Change Speed Gearing. Jules L. Didier, St. Cloud, France. Filed Jan. 28, 1907. Serial No. 354,527.

1. A change speed gearing comprising driving and driven elements, motion transmitting devices operatively connected to the respective elements, and a pair of relatively movable plates arranged to frictionally engage the motion transmitting devices between them and form a direct driving connection between said elements.

889,782. Spring Wheel. Sylvester W. Higgins, Detroit, Mich., assignor of one-half to Frank H. Farnsworth, Detroit, Mich. Filed May 31, 1907. Serial No. 376,491.

1. A vehicle wheel comprising a hub, a rim normally concentric with the hub, having inturned marginal flanges, a plurality of closed spring metal loops interposed between the hub and rim, in close-pressed contact with each other and the hub and rim, and a pair of parallel flanges adjustably secured on the hub on each side of the springs adapted to frictionally engage the edges of the springs for a major portion of their extent.

889,839. Self Propelled Vehicle. John Wilkinson, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed March 11, 1904. Serial No. 197,664.

1. In a vehicle, the combination of the running gear, an internal combustion engine provided with a plurality of air cooled cylinders and with pistons movable therein, and a crank shaft common to all of the cylinders, the cylinders being arranged side by side lengthwise of said shaft and in substantially upright planes at the front of the running gear, and each being provided with external radiating projections, and power transmitting means connecting the running gear and the engine for propelling the vehicle substantially as and for the purpose described.

889,886. Starting Mechanism for Gas Engines. William K. Andrew, Milwaukee, Wis., assignor to International Harvester Company, a Corporation of New Jersey. Filed Dec. 11, 1907. Serial No. 405,981.

1. A starting mechanism for gas engines comprising, in combination, a cam shaft, a rotary valve connected with said cam shaft in a manner to be rotated therewith, a valve casing having said valve mounted therein, said casing having inlet and outlet ports communicating with a source of compressed air supply and an engine cylinder, respectively, and inlet and outlet exhaust ports communicating with the engine cylinder and atmosphere, respectively, said rotary valve having a channel that communicates with said air and exhaust ports alternately.

889,889. Power Transmission Device. Joseph E. Barrett, Detroit, Mich., assignor of one-third to Harry J. Ferrell and one-third to John H. Connor, Detroit, Mich. Filed Aug. 28, 1907. Serial No. 390,483.

1. In an automobile, a motor, a drive shaft, a friction disc, a coupling on the drive shaft having a part movable longitudinally on said shaft, a universal joint between the motor and drive shaft, means for sliding the movable part of said coupling a driven shaft, a slidable friction wheel on the driven shaft, and means for shifting said friction wheel with relation to said friction disc.

889,897. Mechanism for Operating Variable Ratio Gearing. Swinfen Bramley-Moore, London, England. Filed Dec. 8, 1906. Serial No. 346,928.

1. Mechanism for operating the velocity ratio gearing of motor road vehicles comprising two bars pivoted so as to swing in the same plane, extensions of said bars sliding in fixed relation to the said bars, a pivoted operating lever engaging the free ends of the said extensions, and a slotted plate adapted to act as a guide for the operating lever as set forth.

889,927. Automobile Tire Casing. Charles L. Higgins, Montreal, Quebec, Canada. Filed April 6, 1906. Serial No. 310,337.

1. In the manufacture of coverings for tire casings and the like, cementing a strip of leather with its side edges skived to a layer of "frictioned stock," cementing a pair of narrow strips of "frictioned stock" along such skived edges, coating the exposed surfaces of "frictioned stock" with uncured rubber, and finally vulcanizing the whole.

889,951. Shock Shifter Hub. John Muir, Beith, Scotland. Filed April 27, 1906. Serial No. 313,965.

1. The improved mechanism for absorbing shocks transmitted from the periphery of a wheel, to its center, consisting of a ball chamber surrounding the central hub and containing a number of balls, rollers or other rotatable elements superimposed in layers upon one another and having a free space within the chamber; said rotatable elements so superimposed as to receive and distribute the shocks by slipping over one another, substantially as described.

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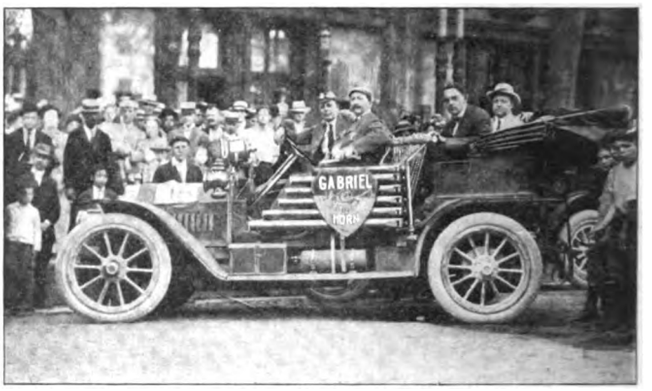


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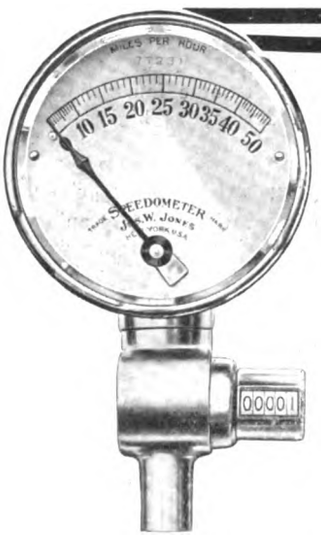
WARNING TO THE TRADE; This company owns and controls all patents upon "Chain Anti-Skidding Devices," (whether secured permanently on the tread or loose so as to "creep" or move freely during rotation of wheel). Suits against unscrupulous manufacturers for infringement of patents are now pending. The Trade is warned not to buy or sell any WEED imitations.

Write for "THE WEED" an interesing Bulletin on the automobile subject.



Weed Chain Tire Grip Co.

35 MOORE ST., NEW YORK



Why Pay $40 or $75

for a speed-indicator which is in the experimental stage?

$25.00 BUYS A PERFECTED

JONES SPEEDOMETER

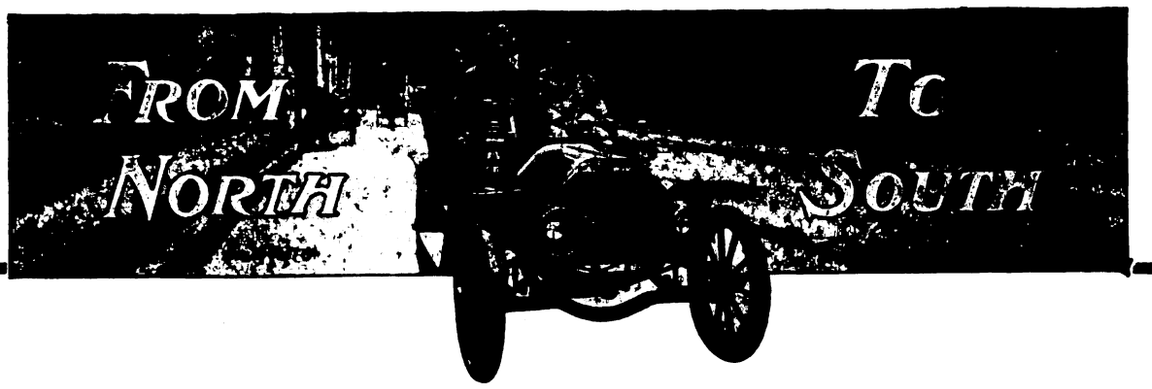
Eight years experience has brought the Jones to a point where it is the acknowledged Standard of the World—the best speed-indicator on the market. Jones is the Pioneer; it is the only instrument ever awarded a Gold Medal for accuracy and all-around reliability. The Jones at $25.00 actually excels instruments made by other manufacturers for $40.00 and $75.00 which are still in the experimental stage!

Write for "The Speedometer," a magazine devoted to speed subjects, and the Special Speed Issue of "The Evening Bulletin," of particular interest to all motorists.

JONES SPEEDOMETER, 76th St. and Broadway **New York**

BOSTON 109 Massachusetts Ave.
CHICAGO 1421 Michigan Ave.
DETROIT 247 Jefferson Ave.
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CLEVELAND 1841 Euclid Ave.

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on a midwinter trip from New York to New Orleans, Mr. Ralph Owen driving an **Oldsmobile,** found in plenty, incidents and conditions of the sort that showed the kind of stuff men and things are made of.

When you stop to consider what an automobile is built and intended for, the endurance of this car is marvelous. He says:

"Between Blue Stores and Hudson the road was particularly rough and rutty, and as we were nearing Hudson one of our rear tires was wrenched off in a frozen rut which was nearly eight inches deep. At Buffalo, a thorough examination of the car was made to see if the terrible strain under which it had been the last three days had in any way decreased its efficiency, but aside from a broken spark plug, which had given us some annoyance the last ten miles into Buffalo, nothing was discovered."

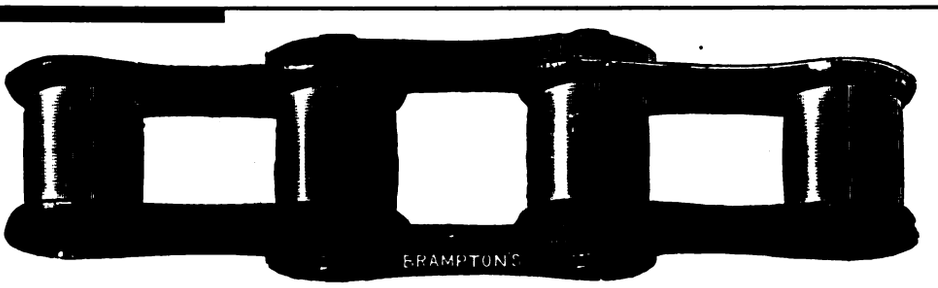
This Car was equipped with TIMKEN ROLLER BEARINGS AND AXLES

Has it ever occurred to you WHY the manufacturers invariably equip the cars they pick for such trips, with **Timken Product?** There is a reason. May we give it to you?

THE TIMKEN ROLLER BEARING AXLE COMPANY, Canton, Ohio

Branches: 10 E. 31st Street, New York. 429 Wabash Avenue, Chicago.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides of the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement. THE BRAMPTON CHAIN is made of self-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material —self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size. We have in stock chains to fit all American and foreign cars.

YOUR 1909 CAR

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

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Agents wanted in unoccupied territory. Catalog on request.

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The car you can afford to buy and KEEP

$2000

The Mitchell appeals **to you,** Mr. Business Man, because it gives you just as much **pleasure**—just as much and as **good service,** is just as **stylish** and neatly **finished** as any car, and doesn't cost you a small fortune to **buy**—or **keep.**

The Mitchell at $2,000 is the standard automobile value.

Prove it—Mr. Business Man.

Get **demonstrations** of the extravagantly high-priced cars—and then try the **Mitchell** over the **same** route.

The Mitchell agent will be glad to take you out if you're interested for 50 or 100 miles any time you say. Call him up (it places you under no obligation)—**Challenge** him—

Just say, "Show Me."

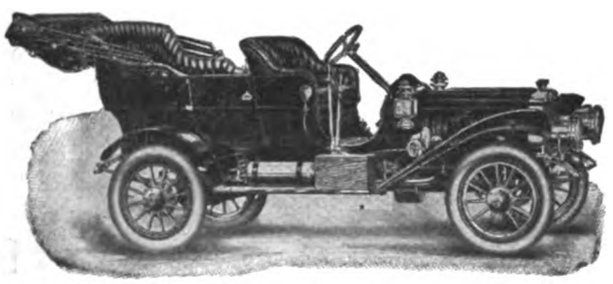
He'll come around with a car and show you a "silent argument" that will get your order or he will retire without a word.

Our catalog No. 18 is fully descriptive of the Mitchell 1908 Touring Car $2,000—Limousine $2,800—Roadster $1,250, and Runabout $1,000. Write for it—we'll also send letters from users, proving the Mitchell to be the most economical car to **operate.**

Mitchell Motor Car Co., 285 Mitchell Street, Racine, Wis.

Standard Manufacturers, A. M. C. M. A.

This car—shown here—35 h. p., 4 cyl., speed 50 miles, finished in Mitchell blue—price $2000—is excellent throughout—the car you ought to have at the price you ought to pay.



Matheson

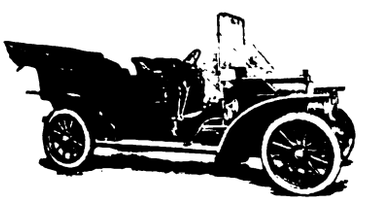
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Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.

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Touring Car $5,500, seats seven; Roadster, $5,000, seats five; Rakish Steering Post, Demountable Tonneau.

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Stays Right

Accurate At All Speeds

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SKILLED WORKMANSHIP
HIGHEST QUALITY OF MATERIAL

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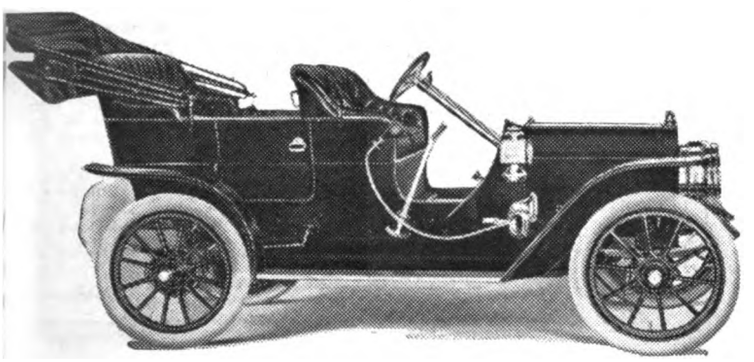
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¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

¶ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

¶ Correspondence invited.

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TIME WAS when tire worry spoiled much of the enjoyment of motoring and the motorist who footed the bills had no voice in the matter.

THEN CAME THE AJAX wrapped tread tire with its superior services.

AND NEXT THE AJAX 5,000 MILE GUARANTEE —If the user of Ajax tires fails to obtain 5,000 miles service from his tire, it is for us to worry—not him, and we make good.

WITH AJAX TIRES the tire problem resolves itself into a plain proposition. We know that they will do, and we offer you the best kind of an insurance for expressing your willingness to find out for yourself.

IS THERE ANYTHING MORE BUSINESS-LIKE THAN THIS?

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

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GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.

BRANCHES:
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are making a 33 x 4 tire which can be applied on a 32 x 3½ rim, and a 31 x 4 tire for use on a 30 x 3½ rim.

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The Supremacy OF Standard Bearings

is shown by their work in the THOMAS FLYER, AMERICA'S WINNER of the New York-Paris Race.

Result—More 1909 cars than ever will be equipped with STANDARD BEARINGS.

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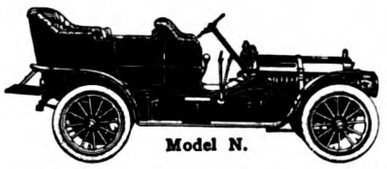
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afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.


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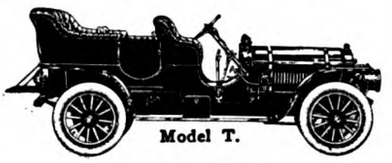
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$3,500

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All Nationals have two complete systems of ignition.

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Write for particulars and our Booklet "What Owners Say About Their Nationals."

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WHEN YOU BUY A STEVENS-DURYEA CAR YOU SECURE A MINIMUM OF UPKEEP EXPENSE AND A MAXIMUM OF PEACE OF MIND.

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Member A. L. A. M.

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(The Best Tubes Ever Manufactured)

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We have given them all kinds of tests, and will truthfully say that they have withstood all punctures, and with the exception of "blowouts," which are liable to occur with any type of inner tube, they have given excellent satisfaction.

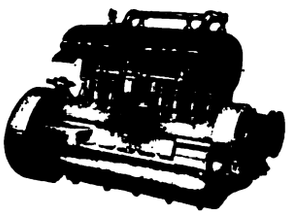
Trusting this letter may be of benefit to you, I remain, Yours very truly, (Signed) JOSEPH A. WEBBER, Lieut., Aide to Chief.

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New factory, Saginaw, Mich.
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The car which has no clutch to slip—no gears to strip—no grease—no noise.

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SHOCK ABSORBER
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The Device that made Safe, Speedy and Comfortable Automobiling Possible.

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drive these cars more miles per dollar cost than any others

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LUBRICATORS — RADIATORS

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McKIM COPPER-ASBESTOS GASKETS

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Investigate for your 1908 car.
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AVOID ACCIDENTS
by using the
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which adds to the efficiency of the lamps, and keeps glare from blinding other users of the highways. Can be fitted to any existing lamp.

PEERLESS MOTOR CAR CO.,
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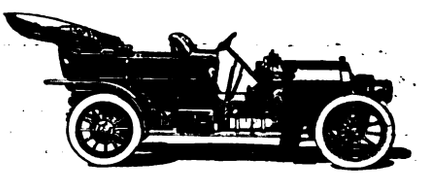
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$1.00 Each

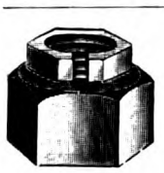
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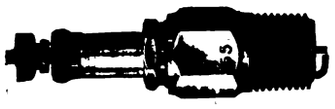
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Continental Ready-Plated Tires.

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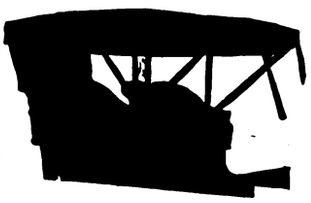
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Cannot Blow Out Rim Cut or Puncture

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Thousands in use.

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YOU NAME THE CAR WE'LL NAME THE GRADE

MADE ONLY BY

CHAS. F. KELLOM & CO

128 Arch St., Philadelphia

Boston Branch: Motor Mart, 87 Church St.

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Garford

Address

Eastern Inquiries Garford Motor Car Co. of New York, 1540 Broadway, New York City.

Western Inquiries Garford Motor Car Co. of Cleveland, 1372 East 12th St., Cleveland.

MICHELIN

MICHELIN TIRE COMPANY

MILLTOWN, N. J.

WE WILL NOT accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

The PULLMAN

4-40 Roadster. Price, $3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

YORK MOTOR CAR CO., York, Pa.

PACKARD

Enameled Ignition

CABLE

Always of one quality—the BEST.

THE PACKARD ELECTRIC CO., Warren, Ohio.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find $2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of _____

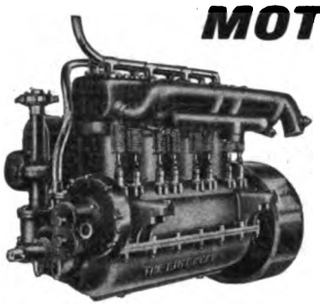
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MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

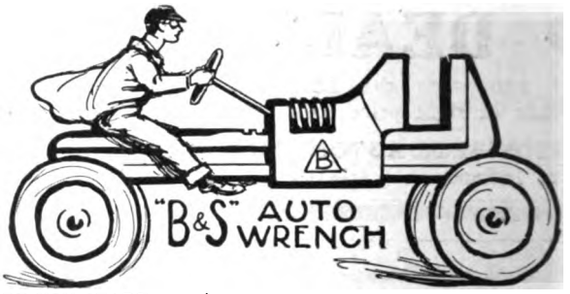
Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

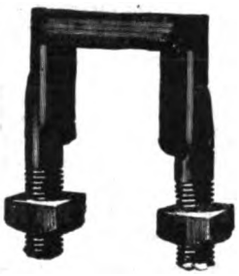


BEFORE YOU START Be Sure You Carry a **B. & S. AUTO-WRENCH**

For Sale Everywhere.

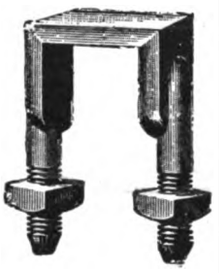
THE BILLINGS & SPENCER CO., Hartford, Conn.

FORGINGS for the AUTOMOBILE TRADE



Satisfaction Guaranteed

Thousands of our **Spring Clips** are now in use, having been supplied to the leading automobile manufacturers.



Have you secured our prices?

THE M. SEWARD SONS COMPANY, New Haven, Conn.

Give Your Car a Good Name
by using

SUPPLEMENTARY SPIRAL SPRINGS

Change a bone-shaker and a spring-breaker into an easy riding, real automobile in which you can take pride and your passengers comfort. The use of S. S. S. change a near-good car to a real good car and add the finishing touch of luxury to the best cars. Our booklet tells you all about them, and is yours for the asking. Write for it.

SUPPLEMENTARY SPIRAL SPRING CO., 4555 Delmar Ave. St. Louis, Mo.

New York Branch, Removed to Motor Mart Building. (Larger Quarters.)



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG—DURABLE
CALELESS—RUSTLESS
SMOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

"RAJAH" SPARK PLUGS

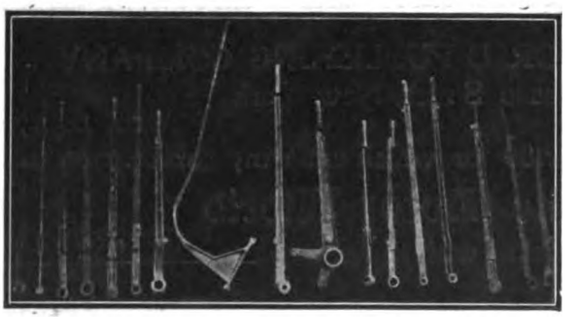
IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

BLOOMFIELD, NEW JERSEY, U. S. A.

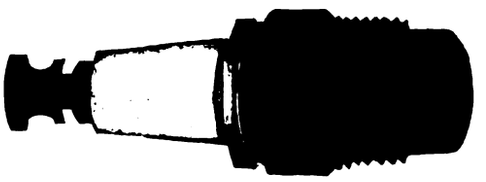
(Watsessing Station, D., L. & W. R. R.)

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Sole Makers

THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.



A Single Trial of the

SPLITDORF Common Sense Plug

will quickly convince you that it is the Plug you need.

In great favor among motorists because of its constant efficiency and reliability. Made in all sizes and threads. From your dealer or our uptown branch, 1679 Broadway. **Price, $1.00.**

C. F. SPLITDORF, Walton Ave. & 138th St., NEW YORK

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ume XVIII New York, N. Y., U. S. A., September 3, 1908 Number 23

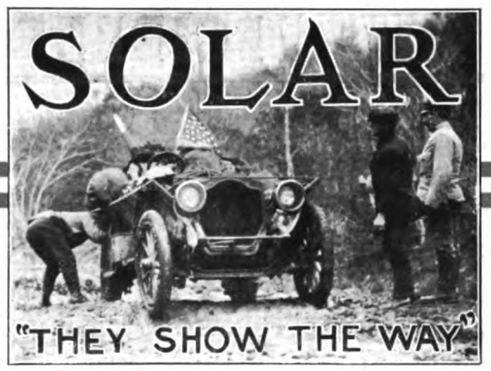
THE MOTOR WORLD

rade paper giving the
rld's Motor News

Ten cents a copy—
Two dollars a year



21,000 MILES
And No Lamp Trouble!



"IN RUSSIA A PIGEON BROKE THE GLASS

in one of our headlights—that's the only lamp trouble we had. The bird flew up against the glass and smashed it into a thousand pieces. This happened just outside of Nizhni Novgorod. From that point on we used one headlight. We had complete Solar Equipment and found the lights not only invaluable when night travel was necessary but when we were forced to camp for the night we had daylight at our command. I'll never forget Solar—nor will I forget this pigeon."

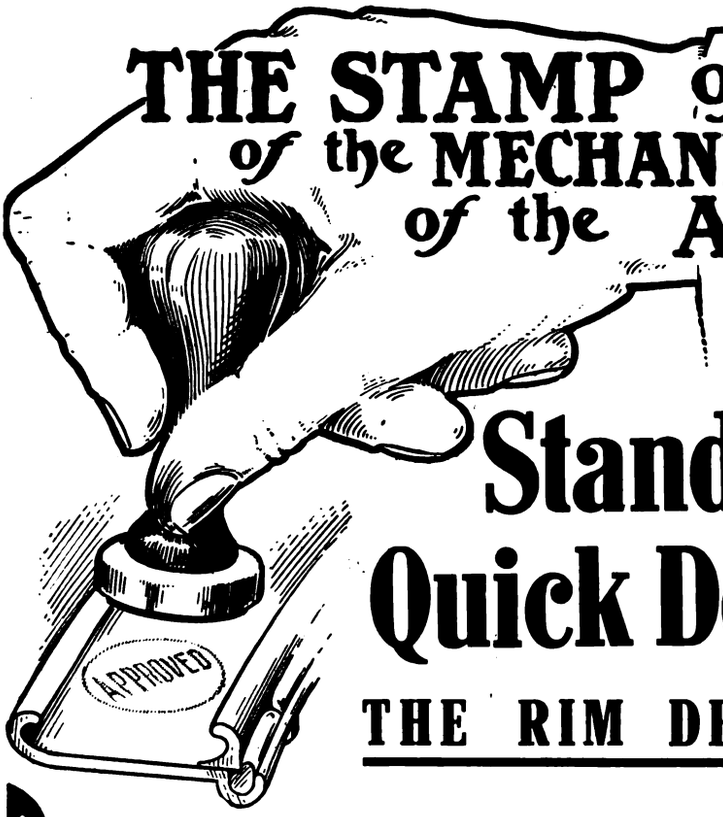
That's what George Schuster, driver of the victorious Thomas Car, has to say about Solar Lamps!

BADGER BRASS MANUFACTURING COMPANY

606 Lyman Avenue **Kenosha, Wis.**

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THE STAMP of APPROVAL of the MECHANICAL BRANCH of the A.L.A.M.



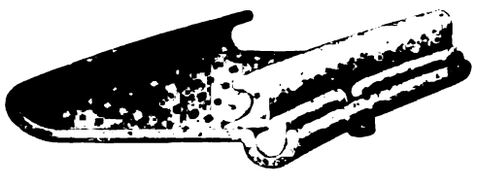
THE Standard Universal Quick Detachable Rim

THE RIM DECIDED ON FOR 1909

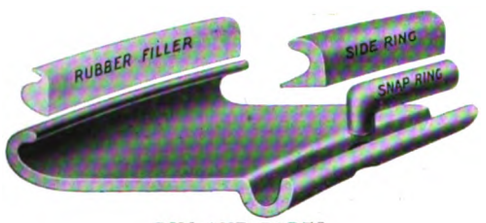
The cuts show the simplicity of operation and the mechanical worth of the rim.



FOR DUNLOP TIRE



FOR CLINCHER TIRE



RIM AND PARTS

¶ After two years of consideration, the automobile manufacturers have chosen the Standard Universal Quick Detachable Rim as the most desirable of all the rims shown to be the standard equipment for American cars as soon as this change can be conveniently brought about. Its adoption signifies its perfection.

¶ There are only two parts to remove—the side ring and the snap or locking ring. Accommodates all standard sizes of tires, Clincher or Dunlop. To insure standard equipment all around, specify

Hartford Tires AND Standard Universal Quick Detachable Rims

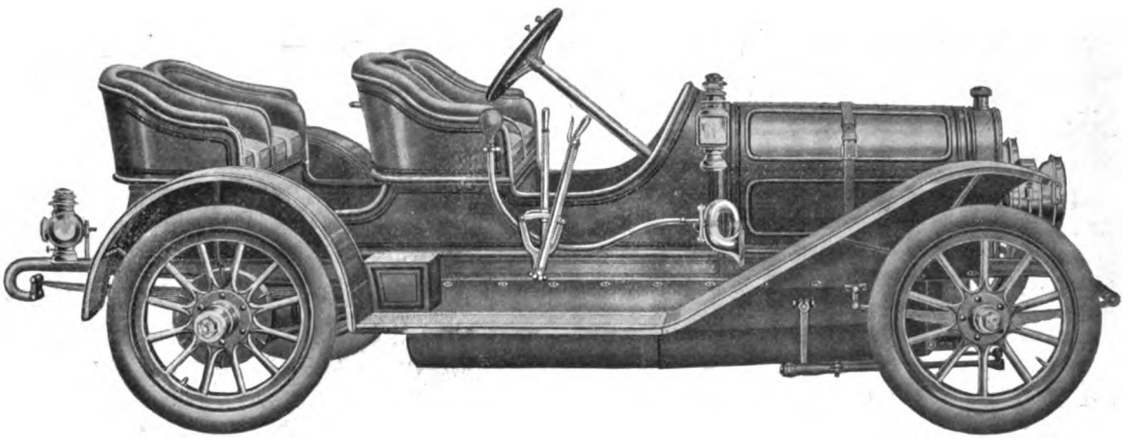
THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 530 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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1909
Pope-Hartford Models



Pope-Hartford Model S, Standard Roadster, $2750

The POPE-HARTFORD 1909 models embody all that is best in automobile construction and will be conspicuous in the foremost ranks of the automobile world.

We invite comparison of the details of POPE-HARTFORD cars for 1909 with those of the world's best motor cars. Because of their perfection, refinement and elegance they will appeal to the superior judgment of critical and discriminating purchasers.

OUR 1909 LINE CONSISTS OF THREE MODELS:

A Standard Touring Car		**Price $2750**
A Standard Roadster	similar to the above illustration,	**Price $2750**
A Pony Tonneau Car	which will be illustrated in this space next week,	**Price $2750**

New and important improvements, not incorporated in any other motor car, are included in the POPE-HARTFORD 1909 CARS. Each improvement which we have added has been given a careful and thorough *test,* and our catalog, now in preparation, explains fully all the details and mechanical excellence of the new models. Let us place your name on our mailing list for an advance copy.

Agents almost everywhere. Correspondence invited with interested dealers.

Pope Manufacturing Company

HARTFORD, CONNECTICUT, U. S. A.

Members A. L. A. M.

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A Supreme Test of Reliability

has been successfully made by a stock touring car running over 100 miles a day for 100 days without a broken part. The

PREMIER

after winning perfect scores in the Glidden and Hower tours and numerous endurance runs, sealed bonnet contests, etc., has by this run of over 12,000 miles over all kinds of roads, shown itself to be

The Car of Known Quality

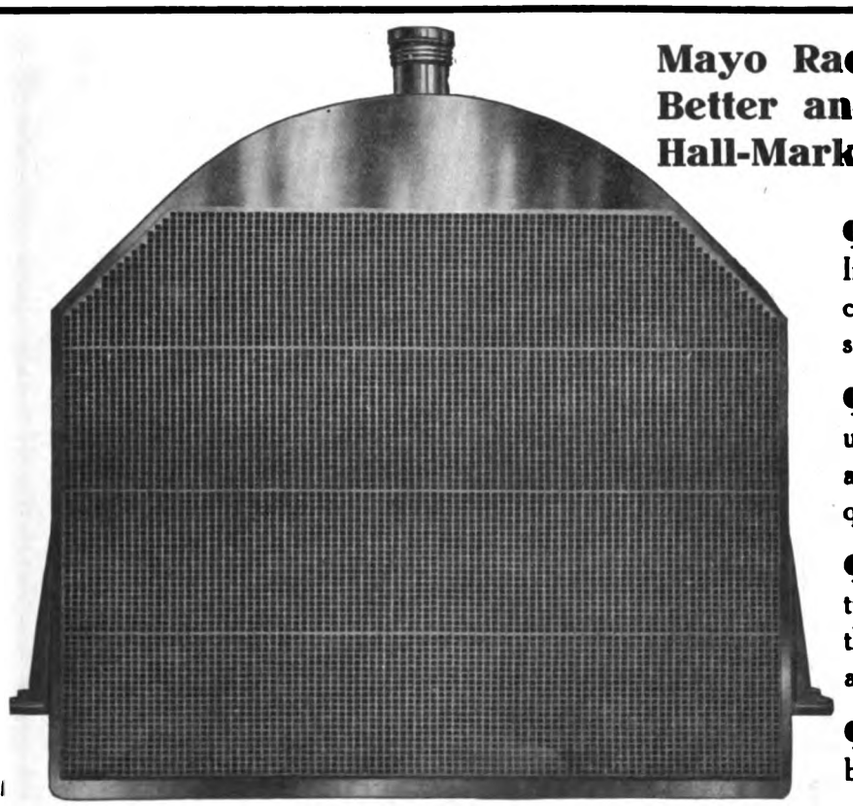
Thousands of enthusiastic owners tell the same story of Premier reliability. The reason lies in the conscientious effort of this company to make the best car in the world.

WRITE FOR CATALOGUE S

Premier Motor Manufacturing Company

Indianapolis, Ind.

Standard Manufacturers, A. M. C. M. A.



Mayo Radiators Make a Good Car Better and Their Use on a Car is a Hall-Mark of Quality.

¶ Mayo Radiators are made in a quality shop. In their construction no expense is spared, no crude methods obtain. In their use complete satisfaction results.

¶ Mayo Radiators perform their functions well under all conditions—and conditions at times are exacting. It is at just such times that Mayo quality asserts itself.

¶ The engineer can eliminate possible radiator troubles from his calculations by the adoption of the best possible radiator. The test of years and use has proved that we make it.

¶ Our capacity limit on new contracts is rapidly being reached.

MAYO RADIATOR COMPANY, New Haven, Conn.

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MICHELIN

REVISED PRICES NOW IN EFFECT

WHILE the unrivalled quality of MICHELIN tires, which has made them for years the STANDARD of the world, remains absolutely unchanged in any particular, the prices have been revised.

The unprecedented demand for MICHELINS from American consumers, which has kept our factory working twenty-four hours per day for the last twelve months, is a plain indication to automobile manufacturers and agents of what they may expect now that MICHELIN'S revised prices are being made known to the public.

PRICES MAILED UPON REQUEST

MICHELIN TIRE COMPANY

FACTORIES AND GENERAL OFFICES, MILLTOWN, N. J., U. S. A.

BRANCHES:

NEW YORK, 1763 Broadway
CHICAGO, 1344 Michigan Avenue
BOSTON, 895 Boylston Street
DETROIT, 247 Jefferson Avenue
BUFFALO, 908 Main Street
CLEVELAND, 2001 Euclid Avenue
DENVER, 15 East Colfax Avenue
LOS ANGELES, 1200 S. Main Street
SAN FRANCISCO, 308 Van Ness Ave.

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TIME WAS when tire worry spoiled much of the enjoyment of motoring and the motorist who footed the bills had no voice in the matter.

THEN CAME THE AJAX wrapped tread tire with its superior services.

AND NEXT THE AJAX 5,000 MILE GUARANTEE

—If the user of Ajax tires fails to obtain 5,000 miles service from his tire, it is for us to worry—not him, and we make good.

WITH AJAX TIRES the tire problem resolves itself into a plain proposition. We know that they will do, and we offer you the best kind of an insurance for expressing your willingness to find out for yourself.

IS THERE ANYTHING MORE BUSINESS-LIKE THAN THIS?

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.

BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodward Ave. — Los Angeles, 1040 S. Main St.
Agents in all large cities.

The Car You Can Afford to Buy and Keep

is the Mitchell.

—Because it is moderate in price ($1,000 to $2,800).

—Just as stylish, handsome and well finished as any car.

—And is perfect in each detail of construction.

—Doing just as well on the road and standing up to wear and tear just as well as the extravagantly high-priced cars.

Know this for yourself, Mr. Business Man.

Get demonstrations of the high-priced cars.

Then form your opinion in a demonstration of the Mitchell.

The Mitchell agent will be glad to take you out for 50 or 100 miles any day.

Call him up—you are placed under no obligation.

$2000

Just say "Show Me"

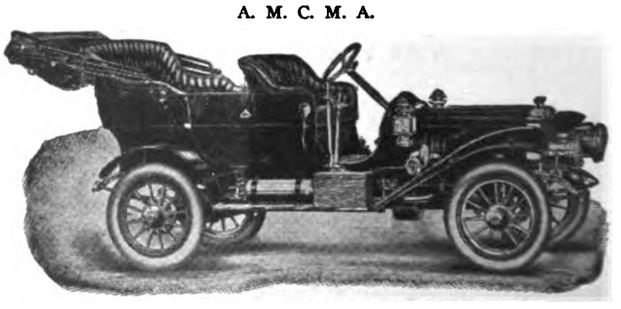
He'll answer with the car—show you a "silent argument" that will convince you.

Write for letters proving that the Mitchell is the most economical car to operate, and for catalog No. 18, picturing and describing the Mitchell Touring Car $2,000, Limousine $2,800, Roadster $1,250, and Runabout $1,000.

Touring Car shown here—5 passenger, 35 h. p., 4 cylinder, speed 50 miles, finished in Mitchell blue—a very neat and extremely desirable car from radiator to tail light.

Mitchell Motor Car Co., 286 Mitchell St., Racine, Wis.

Standard Manufacturers,
A. M. C. M. A.



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FRANKLIN-1909

Bigness and bulk are not style.

You would pick out a Franklin automobile anywhere for its stylish appearance—its symmetrical lines and its perfection of detail, yet no Franklin has any unnecessary bulk or weight.

The Franklin Model H touring-car is a powerful capacious automobile—and looks it. Yet it weighs under 2500 pounds. Other seven-passenger automobiles are far bulkier and heavier, and vastly more expensive to own, but not one is more stylish.

All Franklins have the refined simplicity that is secured only through Franklin air-cooling, and the luxurious riding-quality possible only with the non-jarring Franklin construction. They have long wheel-bases and large wheels and tires. They are easy to manage and strong and safe. And of all automobiles Franklins are the most enjoyable to use.

Franklin closed carriages are especially noticeable for their beauty and style; and the line this year is exceptionally complete.

Model G is built with a brougham body making it very serviceable for doctors or others desiring a two-passenger closed vehicle.

Models G and D are furnished with landaulet bodies.

Model H is built as a limousine. This has the exceptional flexibility produced by the six-cylinder Franklin engine, and is the limit of perfection in closed carriages.

Besides these is the type K2 town-car, seating six. It is built upon our motor-cab chassis and is extra strong and durable.

Models—1909

G 18 H P touring-car, $1850.
G 18 H P runabout with hamper, $1750. With single or double rumble, $1800.
D 28 H P five-passenger touring-car, $2800. Or runabout, with single or double rumble, $2700.
H 42 H P seven-passenger touring-car, $3750. Or runabout, with single or double rumble, $3600.

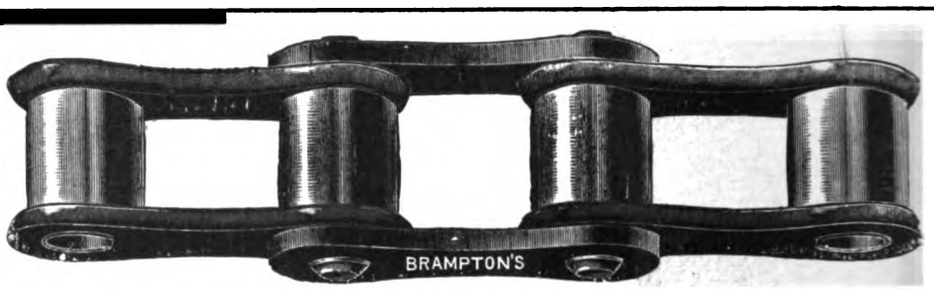
F. O. B. Syracuse.

Write for catalog describing these models in detail.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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THE BRAMPTON MOTOR CHAIN



All side plates on both sides of the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement. **THE BRAMPTON CHAIN** is made of self-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material —self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL**, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size. We have in stock chains to fit all American and foreign cars.

YOUR 1909 CAR

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

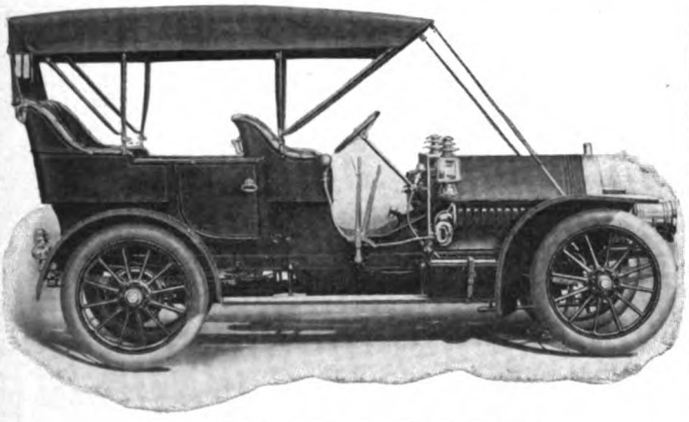
SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.
Agents wanted in unoccupied territory. Catalog on request.

CHAS. E. MILLER, Manufacturer, Jobber, Exporter and Importer
Main Office: 97-99-101 Reade Street, New York

BRANCHES: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824 Main St., Buffalo.
202-204 Columbus Ave., Boston, Mass. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

THE "JEWEL 40"

THE "NON-SKIDDING" CAR



Compare following specifications with other cars at $3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY
234 Walnut Street, - Massillon, Ohio, U. S. A.

The Invincible Schacht Auto Runabout

1909 Model Now Ready



MODEL K

16 H. P. Friction Drive. Gearless and Clutchless. Roller Bearings Throughout. High Rubber-Tired Wheels. Long Concord Springs. The simplest, most practical, efficient and economical car ever built. Recognizes no hills or bad roads and will go anywhere that wheels will travel. **Most Popular and "Talked-of" car since the advent of the automobile. Write to-day for catalogue and agency proposition.**

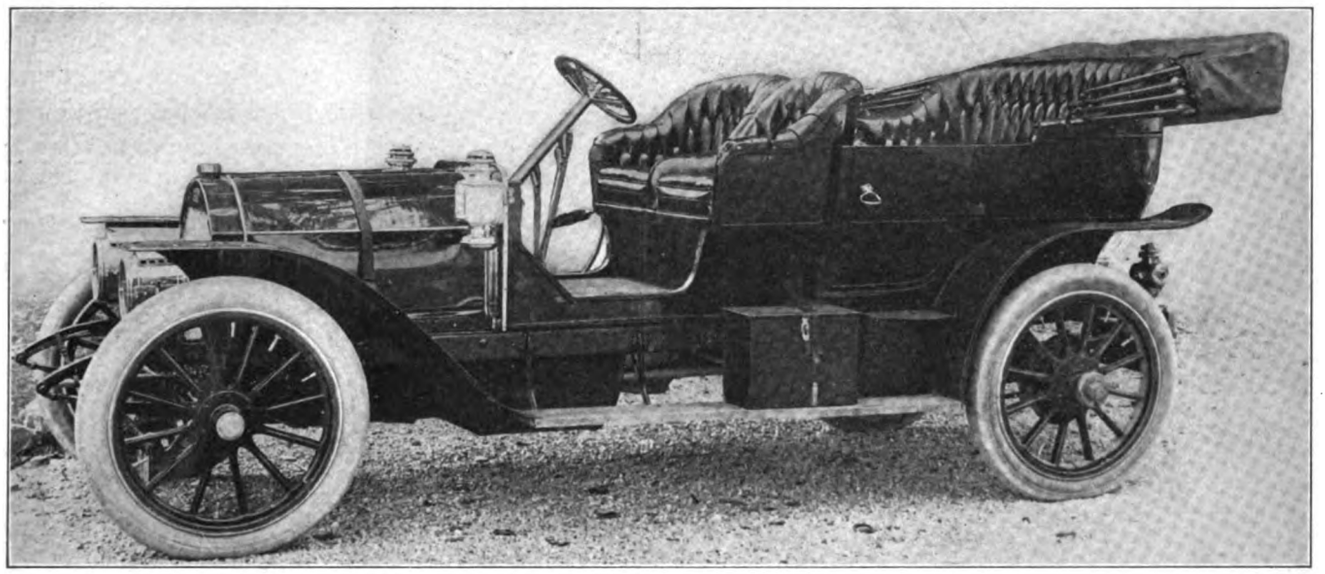
Address M. HARRIS, Sales Manager,

THE SCHACHT MFC. CO., Cincinnati, O.

IOWA DISTRIBUTORS—Campbell & Earl, Fairfield, Ia.
NEBRASKA DISTRIBUTORS—Central Impt. Co., Omaha, Neb.

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APPERSON



The New Model O Apperson, Price $2450

Not an "assembled" car but built throughout in our own factory. Not an "experiment." It has been over a year on the road and has back of it our fifteen years of actual experience in the building of high grade motor cars.

SPECIFICATIONS:

Three, four or five-passenger bodies, optional. Five lamps and generator.
Double ignition by magneto and storage battery. Tire carrier, robe rail and tools.
Motor 30 horsepower. Wheel base 119 inches.

Model O Apperson, winner of its event at the recent Algonquin, Illinois, hill climb, showed greater efficiency than any other car of any make that ever competed in any event held under the auspices of the Chicago Motor Club.

We build higher-powered cars with either the four or six cylinder type of motor.

The Apperson line is the most complete of any offered by an established and successful maker of high grade cars.

TO DEALERS Owing to a largely increased output we are prepared to make selling agreements in open territory with a few reliable, live dealers. Write us.

Apperson Bros. Automobile Company

KOKOMO, INDIANA

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THE SELDEN CAR FOR 1909

Enters upon its second year with a clean record. No "first year" car has ever earned a better reputation or made a better showing.

THE OAR OF MODERATE PRICE

$ 2 0 0 0

Touring Oar **Roadster**
Limousine **Landaulet**

4 cylinder, 28-30 horsepower, shaft drive, selective transmission, metal body, pressed steel frame, excellent hill climber, fine finish and style, roomy tonneau, luxurious upholstery, easy riding, smooth running, economical in up-keep, in fact a high grade car in every particular.

The "Silent Selden"

1909 MODELS READY IN SEPTEMBER

Agency propositions now ready. Send for catalog and specifications.

Selden Motor Vehicle Co.
ROCHESTER, N. Y.
Member A. L. A. M.

SUPPLEMENTARY SPIRAL SPRINGS



¶Cars are like men in that it takes a study of them to realize their possibilities.

¶We have made a study of the spring question and can help you realize to the full the easy-riding possibilities of your car. The use of Supplementary Spiral Springs are a duty you owe to yourself. They provide spring insurance and spring comfort, effectually guarding against shocks to your pocketbook and passengers.

¶Many thousands of the S. S. S. are in use by just as many satisfied users. Better be one of them NOW.

¶Your dealer or garage can fit you out in a few hours' time.

SUPPLEMENTARY SPIRAL SPRING CO.
Motor Mart, New York 4555 Delmar Ave., St. Louis, Mo.

The Supremacy OF Standard Bearings

is shown by their work in the THOMAS FLYER, AMERICA'S WINNER of the New York-Paris Race.

Result—More 1909 cars than ever will be equipped with STANDARD BEARINGS.

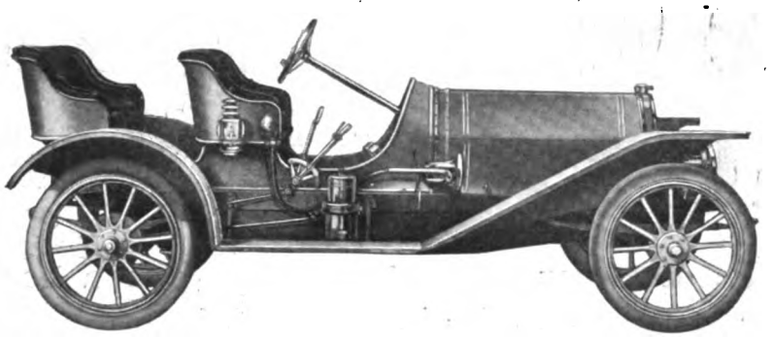
Send for Catalog.

STANDARD ROLLER BEARING COMPANY
PHILADELPHIA, PENNSYLVANIA

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1909

Overland



Model 34
6 Cylinder
$2,000.00

The Model 34 is

The Most Simple **The Most Attractive**
The Most Fully Equipped **The Most Reliable**
AND The Cheapest

six-cylinder car ever placed on the American market. A choice of four bodies, roadsters and tourists given. Write for specifications on our other models to

OVERLAND AUTOMOBILE COMPANY, Indianapolis, Ind.

Model B—Brush Runabout

A CAR OF SIMPLE DESIGN MADE WELL
NOT A COMPLICATED DESIGN MADE CHEAPLY

Its records and the opinions of its users speak more loudly than self praise. Agencies for 1909 are being closed rapidly. Much good territory still open.

BRUSH RUNABOUT COMPANY, Detroit, Mich.

THE OLDSMOBILE

is not only the **World's Best Car,** but one of its oldest and most famous. It gives prestige to both owners and agents.

Model M	Model MR	Model Z
Touring Car, Fully Equipped,	"Flying Roadster," Fully Equipped,	6-Cylinder, 130-inch Wheel Base,
$2,750	$2,750	$4,200

OLDS MOTOR WORKS, Lansing, Mich., U. S. A.
Members A. L. A. M.

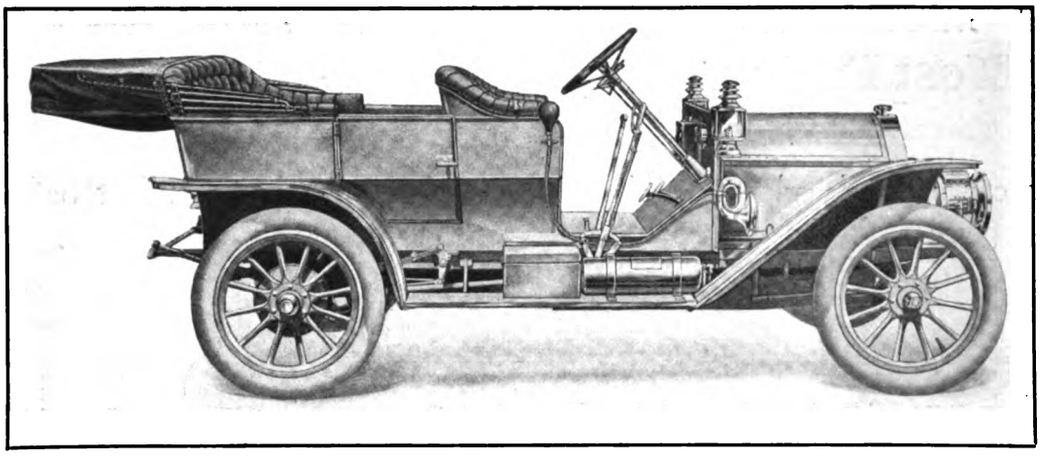
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Stoddard-Dayton

One Quality for all Models
One Price for all Buyers

Hundreds of motor enthusiasts will give a hearty welcome to this latest addition to the Stoddard-Dayton line.



Model 9-A—Price $2,000, f. o. b. Dayton.

This handsome light Touring Car is a duplicate of our regular Model F touring car which has always won such universal favor. Model 9-A is a counterpart of the larger car in everything except size and price. It will bear closest investigation and will not disapppoint the motorist who wants a light Touring Car of Quality at a fair price.

Motor, valve-in-head; 35 H. P. Transmission, selective type. Gears, chrome nickel steel. Ignition, double system, when specified, at extra cost. Wheels, 34x3½ inches. Wheel base, 105 inches. Weight, 2,000 pounds. Equipment: Oil lamps, gas lamps, Prest-O-Lite tank, horn, tool kit, tire repair outfit. Price, $2,000, f. o. b. Dayton.

Model 9-C will be the Roadster companion to Model 9-A. Specifications will be the same, with the exception that wheelbase will be 110½ inches, and body will be along the same lines as our well-known 8-K, with different rear seat combinations, at slightly increased cost.

For 1909, Models F and K will be continued without change, except for refinement of detail.

Watch for announcement in near future of radical changes to be made in Model H for 1909. Write for Catalog.

The Dayton Motor Car Co., Dayton, Ohio, U.S.A.

Stoddard-Dayton

Stoddard-Dayton

Stoddard-Dayton

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ON TOP!! Continental TIRES



"Keep your eye on Continentals"

¶ Motorists the world over claim "Continentals" to be the best and most durable tires made; manufactured in the **largest** tire factory where the watchword is not "how cheap"—but "how **well** can they be made," they prove their great value over other tires by giving **more miles for less dollars** to every user of them.

Cost—Production—Selling Price

¶ **To-day** quantity is the governing power in almost everything. **Two thousand** (2000) **and more Continental Tires** are manufactured every twenty-four hours—consequently our purchasing facilities are unequalled. **We sell Continental Tires** at a profit which has for a basis of calculation our enormous buying and producing ability

Continental Tires at Lower Prices

¶ The above achievements mean that our success is **your** saving and **not** that we are **obliged** to reduce the **quality** and price of **our** product to meet **price** competition. **We share with you** our success by offering you a tire from which you can obtain the **most** amount of mileage **for the least** investment of money.

¶ **Reduced tire expense means using Continental Tires.**

CONTINENTAL CAOUTCHOUC COMPANY

Home Office: 1788-90 Broadway, New York City. **J. M. Gilbert, General Manager.**

BRANCHES: Detroit, 226 Jefferson Avenue. San Francisco, 422-4 Van Ness Avenue.

DISTRIBUTING AGENTS:

Acme Rubber Co., 925 Jefferson Ave., Toledo, Ohio
Centaur Motor Co., 59 Franklin St., Buffalo, N. Y.
Continental Agency Co., 1268 Euclid Ave., Cleveland, Ohio.
Continental Tire Co., 1200 S. Main St., Los Angeles, Cal.
Excelsior Supply Co., 237 Randolph St., Chicago, Ill.
Jas. L. Gibney & Bro., 211 N. Broad St., Phila., Pa.
Neustadt Automobile & Supply Co., 3948 Olive St., St. Louis, Mo.
Plant Rubber Co., 322 First Ave. North, Minneapolis, Minn.
Revere Rubber Co., 700 Baronne St., New Orleans, La.
Sammis & Downer Co., Huntington, L. I.
The Post & Lester Co., 821 Boylston St., Boston, Mass.
The Post & Lester Co., 175 Asylum St., Hartford, Conn.
Western Continental Caoutchouc Co., 1438 Michigan Ave., Chicago, Ill.

REPRESENTATIVES EVERYWHERE YOU CAN MOTOR

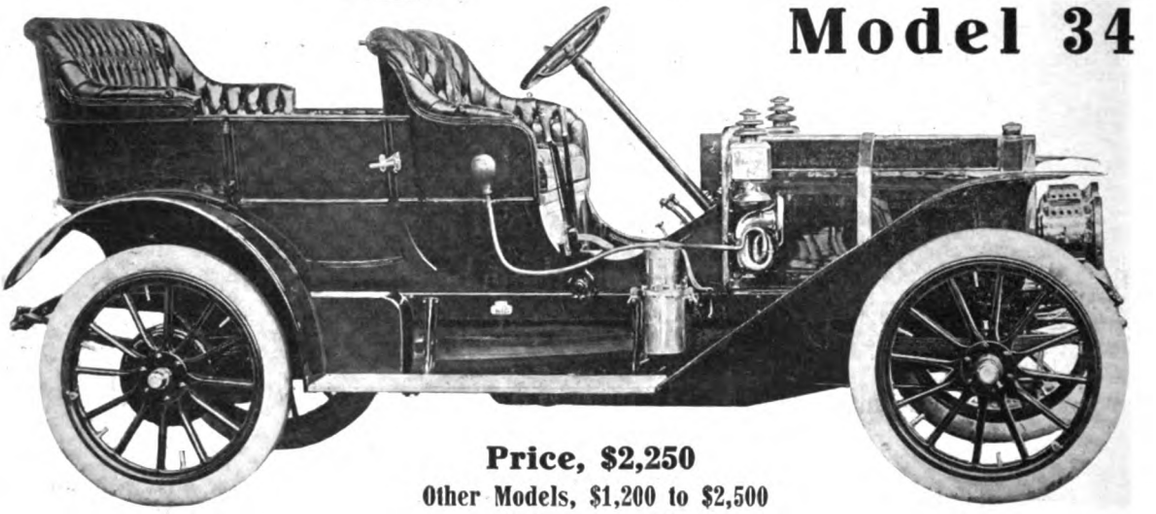
Return this coupon and 1909 prices will be forwarded — also new prices for Continental Ready-Flated Tires.

Name .....
City .....
State .....

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Rambler

Model 34



Price, $2,250
Other Models, $1,200 to $2,500

TRY IT ON THE HILLS

Test this car at half speed on a hill or sand road where power and every ounce of it is needed. Notice how steadily and powerfully it pulls when running slowly under load.

The capacity of the offset crank shaft for doing this extra work is most noticeable at low engine speeds. All that power which in other engines is lost through friction on the bearings and cylinder walls, is added to the driving force by the Rambler offset crank shaft. It reduces friction; eliminates hammer on bearings; gives more power.

The straight line drive delivers the power direct and with least frictional loss to the rear axle. Let us demonstrate these features and the silence and the comfort of this car.

Tell our nearest representative to call at your home and take you to your place of business some morning in a Rambler. Or write your name and address and "Model 34" on a postal and mail to us today.

THE CAR OF STEADY SERVICE

Thomas B. Jeffery & Company, Main Office and Factory: **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, September 3, 1908. No. 23

MUST FIGHT CASE ON ITS MERITS

Court Decides Rushmore vs. Badger Suit is Unlike Others—Suspension of Injunction is Continued.

Although Samuel M. Rushmore, of Plainfield, N. J., tried to show through his attorneys that the Badger Brass Mfg. Co. of New York, was in the same class with the Saxon Lamp Co. and the Manhattan Screw & Stamping Works, against whom he had secured injunctions following allegations of "unfair competition," Judge Lacombe, in the United States Circuit Court for the Southern District of New York, handed down a decision last Thursday making it clear that the court considered the circumstances in the case of the Badger company quite different, and that the favorable decision obtained by Rushmore in the other cases cannot be extended to apply to the Badger Bras company.

Through its attorneys, Joline, Larkin & Rathbone, the defendant company agreed to give bond to any reasonable amount, but asked that the injunction with which it was threatened be further suspended until a final hearing on an action directly against it by the plaintiff Rushmore. Judge Lacombe met the defendant's wishes in this respect and fixed the bond for the protection of Rushmore at $5,000, and also made an apportionment of the time in which it will be necessary for the plaintiff to take the necessary testimony to prosecute his case. This action entirely separates the litigation against Saxon and Manhattan from the controversy with Badger Brass.

The time for the taking of testimony is in Lacombe's decision apportioned as follows: Complainant's prima facie, 30 days from the first Monday in September; defendant's reply not exceed 45 days thereafter; complainant's rebuttal not to exceed 15 days thereafter. When rebuttal is completed, motion by either side will be entertained to place on the calendar. As in the other cases, the prosecution will be waged on the ground of alleged "unfair competition" in relation to alleged imitation of the Rushmore "flared front" designs.

Record Year for the Rambler.

Thomas B. Jeffery, head of T. B. Jeffery & Co., Kenosha, Wis., returned from Europe on Friday last. He had been absent some two months.

When Mr. Jeffery reached his factory in Kenosha, Wis., he received the welcome news that all records for midsummer sales of Rambler cars were broken during the month of August. Instead of the falling off which is usual during the month of August in other years, the sales of Ramblers were three times as large as the sales of August, 1907.

Although the year of 1907 was the greatest in the history of the Rambler business, at the end of the fiscal year of 1907 and 1908 the volume of business was shown to be greater than that of the preceding year, which in view of the widespread financial disturbance is the more remarkable.

Southworth and Koehler Shift About.

A. G. Southworth, for several years the New York agent for the Pope cars, has relinquished that account and accepted the management of the Buick branch, which temporarily will be located in the Southworth store on Broadway. The H. J. Koehler Sporting Goods Co., which previously handled the Buick, has taken the agency for the E. M. F. car. The A. G. Southworth Co., under which style Southworth operated, will wind up its affairs.

Kissel Succumbs to His Wounds.

Louis J. Kissel, president of the Kissel Kar Co., Hartford, Wis., who on August 19th, was shot three times by an enraged employe, succumbed to his injuries on Friday last, 28th ult. Mr. Kissel was 70 years of age and long had been prominent in the affairs of his locality, his automobile factory being but one of several large enterprises in which he was concerned.

MORE ROOM AT THE PALACE SHOW

Rearrangement of Floor Plans Will Permit Increased Number of Exhibitors—Date Set for First Allotment.

According to the prospectus issued this week, the first allotment of space in the American Motor Car Manufacturers Association's show in Grand Central Palace, New York, December 31-January 7, will be made October 8th. All applications received up to the first day of that month will be given equal consideration in the drawings, save that members of the association will draw first for the space in the vehicle section, other than that on the main floor which has been set aside for the importers, who will make their own apportionment, as will the members of the Motor and Accessories Manufacturers.

The general disposition of exhibits will be practically the same as at the previous shows, as follows:

Pleasure vehicles: Main floor and part of gallery floor. Commercial vehicles: First gallery floor. Taxicabs: First gallery floor. Motorcycles: First gallery floor. Tires, Parts and Accessories: Main gallery and first and second gallery floors.

The usual display of balloons and other aerial craft will occupy the top floor of the building, but the moving picture attraction will be eliminated and the space be devoted to accessories. A rearrangement of the floor plans also will afford space for additional exhibitors.

Practically the same rules that governed former shows will prevail. The admission fee will be 50 cents, save on Tuesday, January 5, which will be "dollar day." "Special invitation" tickets—heretofore termed "trade tickets"—will be sold to exhibitors in lots of not less than 100 at 20 cents each. Exhibitors will not be permitted to sublet space nor to display goods which they do not actually manufacture or sell. Signs, decorations and tags will be of uniform design.

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The Week's Incorporations.

Camden, N. J.—Auto Truck Mfg. Co., under New Jorsey laws, with $125,000 capital. Corporators, H. M. Browne, E. J. Forham, P. W. Mills.

Westport, Conn.—Pines Inn and Garage Co., The, under Connecticut laws, with $2,000 capital. Corporators—Louis Long, Mary Long, Irene Long, Westport, Conn.

Cincinnati, O.—Buggy Car Co., The, under Ohio laws, with $2,000 capital. Corporators—Joseph Fettig, Sr., Joseph Fettig, Jr., Newton M. Anderson, Charles Ruiney.

Bowling Green, O.—Gramm-Logan Motor Car Co., The, under Ohio laws, with $100,000 capital. Corporators—B. A. Gramm, W. M. Tuller, J. B. Wilson, R. W. McGahan, Frank Lamb.

Boston, Mass.—Monitor Mfg. Co., under Massachusetts laws, with $50,000 capital; automobile supplies. Corporators—Grant R. Beebe, Hyde Park, Mass.; Fred O. Herne, Fred L. Hewitt, Boston, Mass.

Brooklyn, N. Y.—A. W. Blanchard, Inc., under New York laws, with $25,000 capital; motors. Corporators—Alva W. Blanchard and Lucy Blanchard, 20 Waldorf court; A. Neil Wilcox, 111 Pacific street, Brooklyn, N. Y.

New York City, N. Y.—Walter Christie Automobile Co., under New York laws, with $400,000 capital. Corporators—Van S. Howard, 308 West Forty-eighth street; C. Colgate Moore and G. W. Moore, 602 West Fifty-second street, New York City, N. Y.

Ajax Establishes Two New Branches.

The Ajax-Grieb Rubber Co. this week opened two new branches, one in Philadelphia, the other in Kansas City. The former is located at 316 N. Broad street, and is in charge of Joseph Keir, who formerly was with the Michelin company. Keir is a resident of Philadelphia and is an experienced tire man, having been engaged in the business for the past five or six years. The Kansas City branch is located at 1422 Grand avenue. Its manager is Enoch Graf, for many years past buyer of all rubber goods for the Schmelzer & Sons Arms Co. of Kansas City.

Van's Creditors Allege Queer Methods.

If half of the allegations of his creditors proves to be true, Frank Van Tassel, who was practically all there was of Van's Auto Tire Co., 792 Seventh avenue, New York, certainly made haste to fortify himself against the proverbial rainy day and was not particularly circumspect in his methods of doing so. Three creditors, the Republic Rubber Co., $236; Hartford Rubber Works Co., $652, and Mutual Auto Accessories Co. of America, $208, have filed a petition in bankruptcy against Van's company, and in doing so they allege that the company is insolvent, and had removed and concealed its entire property except some rubber tools and machines of small value; had purchased upon credit goods largely in excess of the amounts usually bought in the regular course of business, and immediately thereafter disposed of the goods, some at less than cost, and the remainder concealed in some place unknown to creditors, and the company kept the proceeds. It was also alleged that within the last month Frank Van Tassel, the president and active manager of the business, has been absent from the store, has refused to see creditors or to answer inquiries relative to payment of their claims. The company was incorporated February 25, 1908, with a capital stock of $10,000. After considering the creditors' petition, the court designated Robert A. Inch as receiver of the concern.

Haynes-Apperson Amalgamation Denied.

Rumors of a proposed consolidation of the Apperson and Haynes automobile companies, of Kokomo, Ind., have been so persistent as to have gained considerable credence in the West. When approached on the subject, however, Elmer Apperson, who would be in a position to know if anyone would, replied to inquiries with the simple statement, "It's all news to me."

Partners Fall Out; Suit Follows.

W. H. Byrne has been appointed receiver for the partnership property of the West Side Auto and Transportation Co., of 2180 Broadway, New York, in a suit brought by Michael O'Connor against his partners, Thomas Doherty, Thomas Flaherty, and Charles Cantillon, for a dissolution of the partnership. They began business in May. The liabilities are $500 and the assets $5,000.

To Produce Palmer's Truck Tire.

The Palmer-Hawkins Rubber Tire Co., Akron, which recently was incorporated under the laws of Ohio, will manufacture the sectional motor truck tire invented by H. A. Palmer. Mr. Palmer himself is president and general manager of the company and A. W. Hawkins, secretary-treasurer.

Thomas Company Engages a Lecturer.

E. S. Thomas, for many years lecturer for the National Cash Register Co., has accepted a similar position with the E. R. Thomas Motor Co., of Buffalo. Mr. Thomas is to make a photographing trip over the route followed by the Thomas car through Europe and Asia in winning the New York-Paris contest, after which he will undertake an extended illustrated lecture tour for the concern.

Horsey to Handle Empire Tires.

E. T. Horsey, who for several years has handled Continental tires in the territory, has obtained the representation for the Empire tires for the greater part of Ohio and has located at 1268 Euclid avenue, Cleveland. He will operate under the title Empire Tire Agency.

In the Retail World.

Chanslor & Lyon, who conduct supply houses in Los Angeles and San Francisco, are preparing to establish a store in Seattle. It will be opened about October 1.

Frederick Livingston, formerly with the Ford Motor Car Co., New York City, has established the Morristown Motor Car Co., at Morristown, N. J. He will handle the Ford and the Jackson cars.

Otto Owen and B. C. Buxton have organized in Chicago the Reo Automobile Co. and have established salesrooms at 1218 Michigan avenue; they will handle Reo cars not only in Chicago, but in northern Illinois.

The John Deere Plow Co., of St. Louis, one of the largest and oldest agricultural implement houses in the West, has "gone into" automobiles. They have taken the representation for the Jackson car on which they have been alloted a generous slice of western and southwestern territory.

C. N. Reed and C. S. Walters, of Tarentum, Pa., have formed the Tarentum Auto Co., to conduct a garage and salesroom. A brick building has been erected at Mill street and West Seventh avenue, and a complete machine shop has been fitted up in the basement. The main floor will be occupied as salesroom and garage.

M. S. Brigham, manager of the Cadillac Motor Car Co.'s retail department in Detroit, is preparing to remove to the other edge of the continent. After a "prospecting tour" to the Pacific coast, he has secured the Cadillac sales agency for the State of Washington, and will establish himself in Seattle, from which point the business will be handled.

The E. C. Long Mfg. Co., of Hannibal, Mo., having consolidated with the Bluff City Plumbing and Heating Co., is said to plan the erection of a three-story concrete building to contain a fully equipped garage. The principal business of the consolidated companies will be handling and selling automobiles and manufacturing electrical and plumbing supplies.

John P. Schneider, one of Detroit's pioneer dealers who now is handling Franklin cars, has leased for a long term of years the property on the southwest corner of Woodworth avenue and Bogg street, Detroit, 131 by 160 feet, on which will be erected several stores and one of the finest modern garages in the city, the garage to be built in the rear of the store property. Plans for the building are now being prepared by architects.

To Make Motor Buggies in Cincinnati.

The Buggy Car Co. has been incorporated under the laws of Ohio, with a capital stock of $20,000, and will locate on Fifteenth street, Cincinnati. The company succeeds to the business of the Postal Auto and Car Co., of Bedford, Ind., which will be transferred from that place to Cincinnati.

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OFFERS M. A. M. 5 PER CENT EXTRA

N. A. A. M. Paves Way for Settlement of Chicago Show Controversy—Rim Question Bobs up Again.

It now seems probable that the Motor and Accessory Manufacturers, Inc., and the National Association of Automobile Manufacturers will be able to reach an agreement in respect to the price of space at the Chicago show; at any rate, the executive committee of the N. A. A. M. at its meeting in New York yesterday paved the way in that direction by resolving to offer the M. A. M. an additional rebate of 5 per cent. on the price of all space occupied by its members, in other words, to make the rebate 20 per cent. instead of 15 per cent., as on the occasion of the previous show. The N. A. A. M. set September 10th as the limit for the acceptance of the proposal. Pending the M. A. M. decision, the show literature which is ready for the printer, is being withheld. As will be recalled, the members of the Motor and Accessory Manufacturers, at their meeting in Atlantic City last month, voted not to exhibit at the Chicago show unless the promoters thereof, the N. A. A. M., accorded more favorable terms.

At yesterday's meeting of the National Association, the rim subject was brought up for discussion, but further action was postponed until the October meeting which will occur on the 7th. On that date the show committee will convene at 9.30 a. m., the executive committee at 11.30 a. m., and at 3 p. m., the first allotment of space at the Chicago show will be made.

Outside of the regular routine, the only other business transacted yesterday was the transferral of the membership of the Wayne Automobile Co. to its successor, the Everitt-Metzger-Flanders Co.

Bright Prospects in Lone Star State.

W. F. Reynolds, who covers the Southern States for the H. H. Franklin Mfg. Co., reports that in Texas, particularly, the outlook for the automobile business is unusually promising. The crops are good, the roads are much better than fancy pictures the climatic conditions are favorable, and the inhabitants are awake to the advantages of motor travel. Reynolds none too shyly hints that owing to the scarcity of water in many parts of the State, the people are predisposed to use the air-cooled cars.

Speaking of the roads, he states that on one of his trips he covered 98 miles, the road being as "level as a floor, with not a rock on it, not a gate to open, not a stream to ford, nor a dog to bark. It is open the throttle wide and whiz 100 miles away in quick time."

"Since the Lone Star automobile route to Seminole was started it has never missed a daily trip," continues Reynolds. "It carries five sacks of mail a day from Midland to Seminole, Andrews, Shafter Lake and Monument, N. M., and now covers a route within nine hours that formerly required two days travel. The old fashioned pony express is very much out of date. Seminole now gets mail in five hours which once took seventeen. On the way to Seminole the road is just sandy enough to keep from getting muddy when it rains. There is not a big hole or creek to cross in the entire distance.

"Midland has three good garages, with another in sight, and plans are now afoot for an automobile line from Seminole to the New Mexico border, and from there to Roswell, N. M., a distance of 268 miles from Midland. Seminole has agreed to its part of the work, and Roswell will look after its side. It is expected that within a few months automobiles can be run easily the entire 268 miles, 160 miles being already in operation."

Pope Creditors Seek Another Dividend.

In the Chancery Court in Newark, N. J., on Tuesday last, 1st inst., Percy S. Bryant, of Hartford, Conn., counsel of the creditors' committee, obtained an order directing the receivers of the Pope Mfg. Co. to show cause on September 8 why they should not be compelled to pay a third dividend of 25 per cent on all approved claims.

In the petition filed by Mr. Bryant he had incorporated a statement of the Pope concerns, dated August 31, showing cash deposits in bank aggregating $1,152,561.99. Of this amount, however, the sum of $345,432.95 represented assets of other insolvent corporations owned by the Pope company, and being thereby not available for the payment of a dividend to its creditors.

September 8 is also the return day for the rule granted by Vice-Chancellor Howell directing parties in interest to show cause why the Pope receivers should not accept the offer of $200,000 made for the Pope-Waverly plant at Indianapolis.

Winton Adopts Automatic Tire Inflator.

Quite the most radical innovation that has been adopted in several years by any of the leading automobile manufacturers was announced this week by the Winton Motor Carriage Co. It is substantially an automatic tire inflator which will render unnecessary the use of the time honored hand pump. It will be applied to all Winton "Sixes," and consists of an extension of the Winton self-starting system, the pressure tank of which will be tapped for tire inflation purposes. Attached to the self-starting cock on the dash is a nipple to which may be screwed a rubber tube leading to the tire to be inflated. By the opening of the cock the pressure of the tank is at once exerted on the tire, which fills with a rapidity and lack of labor more than pleasing to the man who has had experience in pumping an automobile tire by hand.

MITCHELL MEN IN CONVENTION

Meet in Racine as Guests of the Company—Gold Watches as Souvenirs — Big Orders are Booked.

Apart from newspaper men and other guests, 97 Mitchell agents responded to the invitation of the Mitchell Motor Car Co. to talk business and make merry on August 27, 28 and 29, on the company's native heath, Racine, Wis. The occasion proved one that none of those who participated is likely soon to forget. The "making merry" was of the sort that leaves a lasting impression. Nothing was done by halves, as was evidenced by the souvenir of the gathering which took the form of a solid gold watch inscribed with the recipient's name and other wording appropriate to the occasion. Everything else was "on the house." Railroad fares and all other expenses were borne by the Mitchell company. The agents were its guests in fact as well as in name, and they were treated accordingly.

While the festivities played large parts, they did not overshadow the serious side of the conference, for such it was. "Talking business" occupied much of the three days, and the inspection of plant and product, the interchange of opinions and the acquaintances formed did much to knit closer the Mitchell fabric.

The newest addition to the Mitchell line, the $1,500 light touring car, caught the fancy of the agents and as indicating the trend of the times, it is significant that of 2,944 cars for which signed orders, with deposits, were placed during the three days, the new model was in uppermost demand. There was nothing indicating depression or doubts of the future apparent at the convention. "Good prospects" was the common report and the men backed their beliefs with their orders.

It was a very busy three days for the visitors, but an even busier one for the Mitchell heads, William Mitchell Lewis, J. W. Gilson, G. Vernor Rogers and John Bate.

Clinton Goes from Trade to Sport.

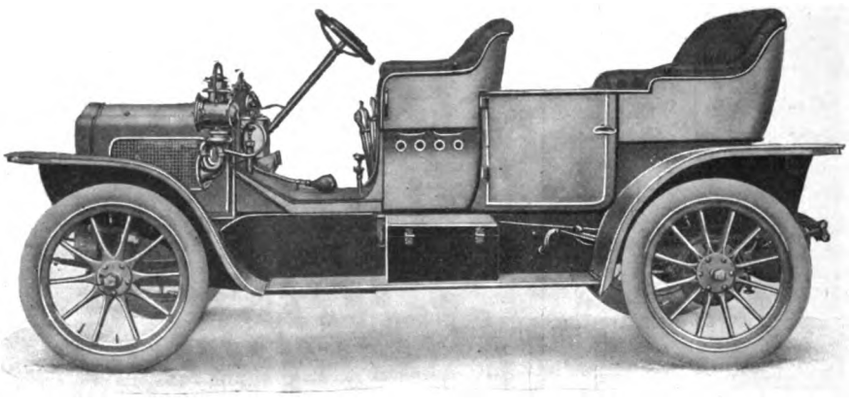
Harry T. Clinton, head of the publicity department of the Association of Licensed Automobile Manufacturers, has resigned that position. He has engaged to become secretary of the contest committee of the Automobile Club of America, having had some previous experiences as a member of the American Automobile Association's racing board.

New Producer of Rubber Accessories.

The Empire Rubber Mfg. Co. has been formed in Akron, Ohio, to manufacture automobile supplies and rubber cement. Its plant is located at 200 East Exchange street, in that city.

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THE 1909 WHITE STEAM CARS



During the coming season, the White Steam Cars will be built in two distinct models which, while differing widely in size, in power and in price, will follow the same general lines of construction. The horse-power ratings of these cars are based on the actual power delivered at the rear wheels, not merely on formulas or on the power delivered at the engine.

The larger of the new cars is known as the Model "M." It is rated at 40 steam horse-power and sells for $4,000., f. o. b. Cleveland, equipped with acetylene headlights and tank, oil lamps, horn and tool kit. The wheel base is 122 inches; the front tires 36 x 4 inches and the rear tires 36 x 5 inches. The car is regulary equipped with a straight-line seven-passenger body.

The smaller of the cars (shown in the above illustration) will be known as the Model "O." It is rated at 20 steam horse-power and sells for $2,000, f. o. b. Cleveland, equipped with oil lamps, horn and tool kit. The wheel-base is 104 inches and the tires, both front and rear, are 32 x 3½ inches. The car is regularly equipped with a straight-line five-passenger body.

The power plants of the two models are identical in design, the only difference between them being in the dimensions of the various parts. The principal mechanical change in the new cars, as compared with previous White models, is in the engine. The new engine is fitted with the Joy valve mechanism, instead of the Stephenson valve mechanism. The valves are driven from the connecting rods, as are the pumps. The eccentrics are done away with and the cylinders are brought close together, permitting the use of a short one-piece crank-shaft, with but two main bearings. The number of parts in the engine is reduced by one half and the entire construction greatly simplified.

As in previous models, the generator—the simplest steam-making device ever designed—consists simply of a series of coils of steel tubing joined together. The regulating system, whereby the temperature and pressure of the steam remain constant without in any way engaging or requiring the attention of the operator, is similar to that in the 1908 cars.

A Circular containing full details of the New Models will be sent on request.

THE WHITE COMPANY

CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St.
BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St.
PITTSBURG, 138-48 Beatty St.
CLEVELAND, 407 Rockwell Ave.
CHICAGO, 240 Michigan Ave.
SAN FRANCISCO, 1460 Market St.
ATLANTA, 120-122 Marietta St.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, SEPTEMBER 3, 1908.

The Fraud in Lubricants.

Despite the long and unremitting effort made to drill into the brains of all who have to do with motor cars, that nothing connected with their use is of such vital importance as the item of proper lubrication, it appears as if the full force of the truth never will be instilled into not a few minds and, what is almost incomprehensible, it seems equally plain that cupidity—the desire to add a few miserable dollars to their profits—on the part of many men engaged in the automobile business is playing a part in defeating the good work.

There is no man in the trade who is fit to remain in it who does not know that the term "proper lubrication" means not only proper lubricants regularly applied in proper quantities, yet evidence accumulates that the number of men who deliberately and unscrupulously make use of inferior oils is quite numerous. Only this week a manufacturer of oils offered the statement that the practice of substituting a cheap grade of paraffin or of neutral oil for oils of known brands and quality is "widely practiced."

"It is practiced, too, by a class of dealers and garages that ought to be above such petty trickery," he adds. "I know of large garages that sell from four to six brands of oil and they buy only one, and pay less than 15 cents a gallon for it."

These strong and rather sweeping assertions would be difficult of belief had they not been proven true by the manufacturer of a well known brand of oil who in a recent round-up of Philadelphia garages discovered eight out of thirteen of the places visited engaged in substituting inferior lubricant for his own high grade product, and, of course, exacting the price of the latter. This particular manufacturer promptly applied the most effective corrective measure. He instituted legal proceedings against each and all of those engaged in the fraud, which is the proper definition of the practice. The astounding results of this "raid" suggests that similar proceedings in other cities may prove equally fruitful.

Regretable as the statement may appear, it is debatable whether the majority of the men engaged in a strictly garage business are truly interested in the welfare of the automobile industry, which is to say, in the satisfactory service of the cars which are housed on their premises. Their unscrupulousness in respect to the sale of lubricants is but one of the indications in that direction. But that many men who sell cars as well as store them stoop to the petty fraud is not readily conceivable. They should be so greatly concerned that their cars render satisfactory service that anything that would influence service of the other sort should be jealously guarded against; and as the cheap nondescript lubricant is an influence of the sort, it scarcely seems probable that they would invite trouble and defraud their patrons by resort to fraudulent substitution which substantially is a form of petty larceny. It certainly would be instructive to discover how many of such dealers are not above the practice complained of.

As proper lubrication often means the difference between the efficient and the inefficient service of a car, the difference btween long life and short life and all the trouble and expense that lies between, the subject is one that seems not too small to seriously merit the attention, if not the co-operation, of the automobile manufacturers themselves. The cheap "paraffine" and the cheap "neutral" oils which are dispensed by the unscrupulous men of the business are the factors responsible for carbon deposits and automobile manufacturers well know that these deposits not only represent imperfect combustion, which means inefficient lubrication, but that they are the cause of some of the most vexatious and too often unsuspected ills to which a motor is heir.

The Two Types of Designer.

From the human and psychological side there are two distinct schools of automobile design. This is shown by the two differing methods in which designers approach the problem of laying out a new car. While every designer is more or less individual in his methods and in his own attitude toward his work, he of necessity falls into that class, on the one hand, which believes in creative work as a duty, or into that, on the other, which regards the judicious adaptation of practice proved successful in service as the true function of the present day designing department. In their extremes these two governing ideas spell freaks and stagnation, respectively.

A concrete instance of the "adaptation" method is found in a well known high powered touring car model which has enjoyed deserved popularity for several years. Preparatory to making the first drawings for this model the designer studied every available type of American and foreign car then on the market, not only with a view to acquainting himself with the general status of the art, but for the more specific purpose of taking the actual dimensions of each, from axle and gear sizes to wrist pin diameters and cylinder wall thickness. Reams of paper were filled with the records of these measurements and by weeks of subsequent figuring, the averages of practice in the more successful cars of about the size and type planned for the new product, were approximated. Motor design, valve size calculations and the selection and disposition of metal in the frame and the transmission system were all evolved from the current practice of other designers. That the resulting car was a marked mechanical and commercial success, bearing reproduction through several seasons without change, in this instance seemed to offer a complete justification of the designer's method in addition to being an evidence of his judgment and skill in wise "adaptation."

Radically opposed to this method is the

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bold work of numerous American and foreign designers in disregarding as far as possible the products of other minds and striking for new and original solutions for the problem presented. Eager for data as to strength of materials and for that complete equipment of the most advanced knowledge concerning the physical and mechanical phenomena to be considered in capable car designing, they spurn anything suggesting slavish imitation of detail, and having created for themselves certain ideals or goals they set about attaining the results they seek, by inventive methods. Naturally enough it is from the "creative" designers that the very best and the very worst motor car conceptions have come, depending upon the ability and knowledge back of the more original features.

The masters of "creative" design, however, do not close their eyes to the work of others through a desire to ensure mere "differentness." That is left to the smaller minds or to the gentry who devise novelties simply to catch suckers or angels. The real purpose is a deeper one and is based on the recognized fact that in invention the most direct and happy solution of a problem is likely to be more easily reached if the mind at work on it is not lead along paths pursued by others. It requires a peculiar quality of intellect to be able to feed on all the facts and data gathered by others without absorbing at the same time the opiates of imitation and copying.

The quick and impulsive patronage that has been given to radically new designs having appearance of superior qualities over previous types, by liberal and enthusiastic buyers, has been an unique feature of the automobile business, in marked distinguishment from the general treatment accorded daring improvers in other lines in the past. The encouragement thus given the "creative" school has in no small measure accounted for the rapid progress and development of the art. But as the composite car more nearly approaches perfection the dangers from the commercial standpoint in radically new ideas multiply, since time tried practice can be called upon to support the "conservative" and "adapted" designs which commercially astute makers offer.

COMING EVENTS

September 5, St. Paul, Minn.—Minneapolis Automobile Club's race meet at State Fair, Hamline track.

September 5-9, Los Angeles, Cal.—Automobile Dealers Association's reliability run to San Francisco.

September 7, Wildwood, N. J.—Motor Club of Wildwood's race meet.

September 7, Denver, Col.—Denver Motor Club's 300 miles stock car race.

Sept. 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7, Lowell, Mass.—Lowell Automobile Club's 200 miles road race, on Merrimac Valley boulevard.

September 7, Columbus, Ohio.—Columbus Automobile Club's race meet.

September 7-8, Morris, Ill.—Chicago Motor Club's two days' race meet, Chapin Park.

September 7-12, Hartford, Conn.—Connecticut State Fair Association's outdoor show and grand circuit races at Charter Oak Park.

September 11-12, Brighton Beach, L. I.—Motor Racing Association's 24 hours race, Brighton track.

September 11, Springfield, Mass.—Springfield Automobile Club's hill climb on Wilbraham hill.

September 12, Louisville, Ky.—Louisville Automobile Club's race meet at Churchill Downs.

September 14, Chicago, Ill.—Chicago Motor Club's annual economy run.

September 16-17, Long Island—New York Automobile Trade Association's mechanical efficiency test, New York to Montauk Point and return.

September 23-24, New York City.—Dust trials, smokeless exhaust and brake tests, under auspices of New York Automobile Trade Association, Central Park.

September 20, San Francisco, Cal.—Olympic Athletic Club's race meet at Tanforan Park.

September 20-30—Kansas City Automobile Club's endurance run, Kansas City, Mo., to Oklahoma City, Okla., and return.

September 23-24, Boston, Mass.—Bay State Automobile Association's 24 hours endurance run, Boston to Bretton Woods, N. H.

October 6-9, Chicago, Ill.—Chicago Motor Club's 1,000 miles reliability run.

October 7, Philadelphia, Pa.—Quaker City Motor Club's 200 miles road race, Fairmount Park.

October 10, Long Island—Elimination trials for Vanderbilt cup contest.

October 17, Hartford, Conn.—Automobile Club of Hartford's hill climb, Avon Mountain.

October 24, Long Island.—Vanderbilt cup contest.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

January 23-30, Philadelphia, Pa.—Philadelphia Automobile Trade Association's annual show.

February 6-13, Chicago, Ill.—National Association of Automobile Manufacturers' show, Coliseum.

Radiators and Overheating.

Childlike pride which many men exhibit in a radiator system that under almost all conditions of service is "as cool as a cucumber," will be given a rude shock by the conclusions of the investigators of radiator problems which are printed in another column and which are to the effect that reduction of half of the present size would serve as well. They make clear that radiators which cool the water in the cylinder jackets much below 160 degrees Fahr., adversely affect the efficiency of the engine. For the most perfect running an explosive motor requires the highest heat it can stand without inducing preignition or endangering cylinder walls or piston parts.

While the fear of the dread "overheating" has in the past lead many owners of a small car to install disproportionately big radiators, few of them have been able to account for the reduction in maximum power which followed the change, though it was in nearall cases due to too great a cooling of the engine. The ideal for a cooling system is one that will heat up to the temperature of maximum engine efficiency as quickly as possible, and will then hold to that mark as long as the motor is running.

If the flow of water through the circulation system is free and thorough, the radiator should heat up rapidly after the engine is started. A radiator that stays cool shows either that it is too big for the engine or that the circulation is clogged.

"It is better to be sure than to be sorry," as some of the men who are mixing with the "outlaw" movement will do well to realize before getting in too deeply. The exception is extremely rare when "outlaws" have not had to bend their necks and partake of a most unsavory dish.

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THE RACE NOT TO THE SWIFT

Minneapolis Hill Climb Ruled by Mathematics—Webster Makes Best Time, but Clark Wins by Formula.

Following the example of Chicago's exponents of higher epithetics as applied to automobile hill climbing and the subsequent relation of values thereto as evolved therapeutically, whatever that may mean, Minneapolis's high priests of calculus filled their reddwarfink-pencils and figuratively dipped into phases of higher mathematics as applicable to loga and other rithms on Saturday last, 29th ult. The Minneapolis calculators finished up the job quicker than did the Windy City figurers a couple of weeks ago, but to do full justice to both sides it must be explained that Chicago had only its own city to draw from plus the village schoolmaster at Algonquin, while at the Minneapolis hill climb all the mathematical professors from the Twin Cities—which includes both Minneapolis and St. Paul—were out to the Cedar avenue hill in force and automobiles.

It is not quite plain just which formula was used in determining the results of the Minneapolis ascending test. Some have it that the square rdot of the root of all evil, raised to the nth power and divided by the difference of the cylinder capacity of the car and the tanking capacity of the driver, multiplied by the square of the voracity of the latter, was the formula that was employed. On the other hand it is advanced that the formula went something like this: Cylinder capacity of the car multiplied by the time in seconds, divided by the weight of the car and driver. Whichever formula is correct that one was used, and winners were evolved in the ten classes, which wasn't very hard to accomplish in at least three of the classes; they had one entry in each.

Despite the fact the hill was located ten miles south of the court house, a large crowd enthused over the sport, and more than 300 non-competing machines, were lined up alongside the course. The upstretch measured 2,136 feet, and with a sharp curve midway, there were sufficient thrills to satisfy those who congregated at that point. There is a rise of 105 feet in the course. A speedway of gravel, while not in as perfect condition as it might have been, made a splendid track for the drivers to show off the best qualities of their machines. It is estimated that at least 300 cars were parked along the roadway and that 1,500 people saw the climbing contest. So great was the crowd at the midway curve and at the finish that the efforts of two policemen were necessary at the curve to keep the spectators from danger, and the officials at the finish had more than they could do.

As frequently happens in formula hill climbs, the car which made the fastest time did not necessarily win the class in which it made the fastest time. For instance, in class C, Gordon Bird in a Corbin car, climbed the hill in 33⅕ seconds, while H. J. Clark, in a Pope-Hartford car, required 43⅘ seconds to do the trick, yet the latter was evolved the winner. This was the only perverse case which occurred, however.

Class A was for motor buggies of the high wheel type and a Holsman driven by W. C. Rader carried off the honors by climbing the hill in 1 minute 12 seconds, which gave it a percentage of 6.547. Two Buicks, driven respectively by Charles Nyquist and D. W. Onan, finished in those positions both in respect to time and percentage.

Three of the classes resulted in walkovers, but the single entrants made the runs, nevertheless, the winners being A. C. Miller, Stoddard-Dayton, and Yaul Hoffman, who won two classes with his PierceArrow of endurance run fame. There were three other classes in which the formula was not used, the fastest time countinfi, and in these Gordon Bird, Corbin, was returned a winner in Class G, with George H. Seeley, Moon, a winner in Class I. Bird's time was 33⅗ seconds, and Seeley's 47 seconds. The class for steam cars went to George D, Webster, who defeated C. G. Sigwald by 9⅕ seconds in 30⅗ seconds, the fastest time of the afternoon. Bird lived up to the suggestiveness of his name by making the fastest time among the gasolene entrants. The summary:

Driver.	Name of Car.	H.P.	Cyl.	Wt.	Time Sec.	P.C.
	Class A					
W. C. Rader	Holsman	12.4	2	1,105	72	6.547
H. B. Allen	Schacht	14.	2	1,465	80.4	6.599
	Class B					
Charles Nyquist	Buick	22½	4	1,725	44.2	4.30
D. W. Onan	Buick	22.5	4	1,685	46	4.52
Bohn Fawkes	Overland	19.6	4	1,880	50	4.60
Walter G. Benz	Jackson	22.	2	2,255	51.6	4.95
George Dorr	Ford	22.5	4	1,375	47	5.09
W. E. Wheeler	Ford	22.5	4	1,240	49.8	5.18
John B. Lee, Jr	Rambler	20.	2	2,750	78.8	7.44
	Class C					
H. J. Clark	Pope-Hartford	27.2	4	3,310	43.8	3.53
Gordon Bird	Corbin	32.4	4	2,130	33.2	4.21
Ernie Sampson	Rambler	32.4	4	2,670	45.8	4.90
	Class D					
A. C. Miller	Stoddard-Dayton	36.1	4	2,620	35	4.73
	Class E					
Paul Hoffman	Pierce Arrow	60.	6	4,350	37	5.50
	Class F					
Paul Hoffman	Pierce Arrow	60.	6	....	38.6	....
	Class G					
Gordon Bird	Corbin	32.4	4	....	33.4	....
A. C. Miller	Stoddard-Dayton	36.1	4	....	35	....
	Class H					
H. J. Clark	Pope-Hartford	27.4	4	3,310	43	3.47
Louis Bousfield	Overland	19.6	4	1,880	64	5.34
	Class I					
George H. Seeley	Moon	32.4	4	....	47	....
John B. Lee, Jr	Rambler	20.	2	....	81.8	....
	Steamers.					
George B. Webster	Stanley	20.	2	....	30.4	....
C. G. Sigwald	Stanley	20.	2	....	39.6	....

EXTEND VANDERBILT ENTRY LIMIT

Cup Commission Allows Another Month—Entries in Hand and in Prospect—Steel Grandstand Ordered.

Five American and one foreign car constituted the total entry list for the Vanderbilt cup race on the 1st inst., when the list was to have closed. In addition to these, no less than half a dozen American makers have promised to enter, while two or three who have not definitely promised are expected when the time comes. In order to give them more time to reach a decision, the closing date for entries at $1,000 each, has been extended to October 1.

The actual entries to date are a six-cylinder Acme, a Mora, two Knoxes, and a Chadwick "six," while the only foreign entry is Robert Gray's Mercedes. The following cars have been promised, but not yet entered: Thomas, Locomobile, Roebling, Pennsylvania, Frayer-Miller, and Pope-Toledo. George W. Young's 100 horsepower Fiat also is a possible entry.

A. L. Riker has announced that one Locomobile is being prepared by the company with the expectation of putting Joe Tracy at the wheel, as in previous Vanderbilt races, and that a second Locomobile also may be entered. It is also stated that

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syndicates have been formed to enter the 1906 Thomas, Pope-Toledo and Frayer-Miller cup cars. Out in Trenton, men are working on the Roebling machine, while of those cars already entered the Acme is being tested out almost daily at Reading, Pa., and the Knox people are working on their team of cars at Springfield, Mass. The Chadwick and Mora entries are designed for great speed and will shortly be put through some severe road testing.

While unfriendly critics have been circulating stories of the probable abandonment of the contest, the Vanderbilt cup commission has ordered the erection of the steel grandstand, which will seat 10,000 persons. At present there is some doubt about an elimination race being held, but the cup commission insists that enough entries have been unofficially assured to necessitate one.

Extra precautions are to be taken this year as regards patrolling the course. the Nassau county supervisors having specified in their agreement with the Vanderbilt cup commission that more adequate protection for the public shall be provided.. Special officers and flagmen in white uniforms will line the entire length of the course. In addition to these officers the association, according to a statement made recently by A. R. Pardington, will furnish about 1,200 uniformed and armed guardsmen to patrol the roads, and that they will be men of better quality than the squads of "ornaments" who dotted the course in previous years.

Several drivers already have been nominated for the entered cars. Charles Basle and William Bourque, who are to drive the Knox cars at Lowell, Mass., on Labor Day, will handle that company's two entries in the Vanderbilt. It was Basle who scored a world's record kilometer at Ormond Beach in H. L. Bowden's Mercedes three years ago, and he has since made several notable performances abroad. Emile Stricker has been engaged by Robert Graves to pilot his Mercedes. Stricker has been driving Porthos cars in the Grand Prix and other European races the last few years and it is to this driver that Louis Strang, who was his pupil, attributes much of his success as a racing driver. George Salzman will be the probable driver of the Thomas entry which has been assured.

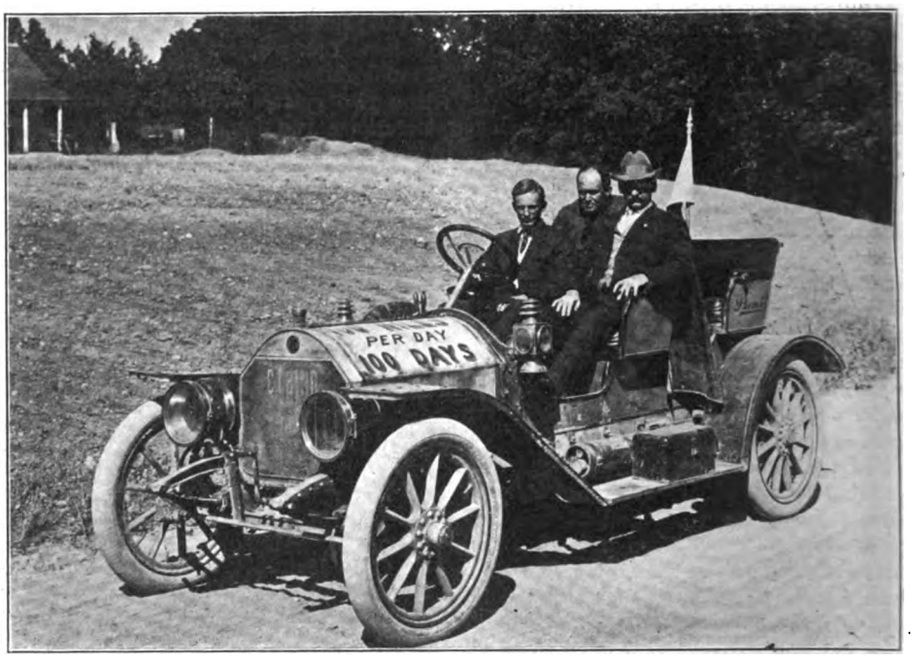
Confusing Two Well Known Names.

The similarity of names has on several occasions caused confusion in the affairs of E. R. Thomas, the Buffalo manufacturer and E. R. Thomas, the New York banker and speed maniac. In connection with the revoking of the latter's license in consequence of his recent smashup, a Trenton (N. J.) daily paper informed the public last week that the victorious New York-Paris Thomas car had just had its license revoked by Commissioner Smith of New Jersey. Trenton, which is noted chiefly for having produced such a celebrity as Miss Rose Stahl, should purvey its news a little more accurately.

CENTURY OF CENTURIES NEAR END

Premier Car Maintains Daily Schedule of One Hundred Miles—Far Ahead in Its Total Mileage.

While the Premier century car, which Joseph Moore is driving, has not yet finished its one hundred days run of one hundred miles per day, it has nevertheless covered more than 10,800 miles, and when the driver pulled into Indianapolis this week, he and the car were given a rousing reception. About 20 local motorists met the car at Greenville, 25 miles out, and the Premier company tendered a chicken dinner to the man at the wheel and made the return joyous. The car's 10,000 mile mark was passed at Pittsburg, Pa., on August 24, but the one hundredth day will not be reached until September 8, making the total mileage by that time over 12,000 miles.



THE PREMIER "CENTURY PER DAY" CAR

The performance is a most interesting one, inasmuch as the motor is in excellent condition and shows no wear or noise, whatsoever. It is claimed that not one part of its equipment has been replaced since the run started. This automobile took part in the Glidden tour as an official press car and covered the entire distance over the half-dozen ranges of mountains running on schedule each day. At the close of the tour, it went direct to Boston and since then has been making its daily centuries in and between the various large cities.

Springfield to Abate Headlight Glare.

Mayor J. W. O'Brien, of Springfield, Mass., called a conference on Friday of last week to discuss the dangers incident to the use of glaring arc headlights on street cars. A body of 15, representing motorists' interests and superintendents of two street railways were present. On behalf of the Springfield automobilists, who have been complaining for some time of the dazzling headlights on trolleys, F. W. Bement read a long list of cities in which a plan for turning off street car lights or subduing them, was in force. The attitude of the railway representatives was that they were willing to try any feasible plan for doing away with the powerful arc lamps which would not endanger the safe operation of cars.

It was finally arranged that street cars shall be equipped with switches on the dashboard for the quick control of the headlight and that motormen shall be instructed to extinguish the light when a trolley meets an automobile or carriage in streets where the glare would confuse or endanger drivers. This idea, it is believed, will do away with one of the most annoying as well as dangerous features of night driving.

Legal Fight for Good Roads.

Aggressive methods for making officials look after the conditions of the roads for which they are responsible are being used by the Automobile Association of Scranton, Pa. Warrants have been sworn out by the organization for the arrest of the officials of Archbold borough on the charge of maintaining a nuisance in failing to keep the roads in repair.

For a Stage Line in Tennessee.

Col. I. Hill Dungan, of Humboldt, Tenn., who is described as a retired capitalist, is reported as forming a company to operate an automobile stage line from Humboldt to Dyersburg via Gibson Wells, a health resort.

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RULES FOR EFFICIENCY CONTEST

Competition Restricted to Stock Cars Fully Equipped—Classification and Sub-Classification of Entrants.

The rules for the mechanical efficiency motor car test under the auspices of the New York Automobile Trade Association, which will take place September 16 and 17, restrict the competition to stock cars which must be fully equipped with bodies and seats, such as are shown in maker's catalog. No car will be considered completely equipped unless it appears as catalogued or in advance sheets, except top and glass front. Chassis must all carry stock touring or runabout body complete, including regular tonneau or rear seats, fenders, steps, running boards, lamps, horns, mats, etc. Extra tires may be carried, but no extra parts of the car or its mechanism, tools excepted, and no repairs or replacements of parts will be allowed except to the ignition system and its parts, though the driver and mechanic may make other mechanical roadside adjustments. Tire repairs and parts may be furnished by and carried on tire makers' supply cars, and tire makers' helpers may fit tires wholly or in part; but tire makers' cars must be regularly entered in the run in order to participate, as no cars of any kind will be permitted to participate unless regularly entered and numbered.

Before starting the entrants will be required to present their cars to the technical committee for examination, to determine whether or not conditions are complied with. The cars will be again examined by the committee at the finish of the run.

Where the car is driven with magneto, for which an extra charge is made, the amount will be added to the price of the car at the time of entry. Any manufacturer or agent entering a stock machine must agree to sell it at the entered price, and imported cars must be entered at their selling price in this country.

A liberal time schedule and time limit will be provided to suit the different classes and powers, but time lost for tire repairs will be allowed. Open controls and checking stations will also be maintained, with motorcycle couriers to observe and report any infractions of the rules.

The classification will be as follows:

Class A—Open to all cars selling for $850 or less.

Class B—Open to all cars selling for $851 to $1,250.

Class C—Open to all cars selling for $1,251 to $2,000.

Class D—Open to all cars selling for $2,001 to $3,000.

Class E—Open to all cars selling for $3,001 to $4,000.

Class F—Open to all cars selling for $4,001 and over.

Class G—Open to taximeter cabs carrying two passengers and driver.

All entries in these classes will be further subdivided by their passenger-carrying and load capacity; for instance, small runabouts carrying 2 passengers; small runabouts carrying 3 passengers; small runabouts carrying 4 passengers; touring cars carrying 5 passengers; touring cars carrying 7 passengers; touring runabouts carrying 2 passengers; touring runabouts carrying 3 passengers; touring runabouts carrying 4 passengers. Framed certificates will be awarded each successful trade entrant and bronze medals for the winning drivers in each class.

The route will embrace the whole of the south side of Long Island from Bay Ridge, its westerly end, to its easterly end at Montauk Point, and the return trip, crossing Long Island at Good Ground to Riverhead, taking in the whole of the North side. The program contemplates a midday clam bake at Capt. Bill Graham's Ye Anchorage Inn at Blue Point, L. I., and an entertainment with campfires, and a mammoth roast ox barbecue and band concert at night at Montauk Inn, besides a second-day noon luncheon stop at Riverhead.

Comet Shines at Santa Rosa Meet.

With clear skies, a smooth track and an enthusiastic crowd numbering 2,000, the race meet at Santa Rosa, Cal., on August 23d, was a big success. The feature event was the 25 miles free-for-all, won by Fred J. Wisedan, driving a Stoddard-Dayton, who finished in 29:44. The Comet, a San Jose made car, scored the fastest mile in 58 seconds. It won the class for cars under $1,500, covering the distance of ten miles in 11:05, although the Buick gave it a hard run for the money. These two cars finished in the same position in the five miles event for cars under $2,500, the former finishing in 5:41⅗ and the Buick in 5:44. The Comet had a big day as it also won the mile novelty in 1:55. A Stearns car secured the ten miles for cars listing over $2,500, with a White a close second, and a Peerless third. The 25 miles for motorcycles went to a Thor machine in 27:18.

Automobile Fire Engines to Compete.

What undoubtedly will be one of the most unique automobile races ever held, is scheduled to take place at Joplin, Mo., on September 8. It is to be an automobile fire engine contest—the first of its kind ever held in America. The fire wagons of the Robinson Fire Apparatus Co., of St. Louis, are to be pitted against cars manufactured by A. C. Webb, of Vincennes, Ind., late of Joplin, Mo. In addition to speed trials, these machines will be put through other competition tests. This will be at a tournament of firemen from five middle western States. Joplin claims to be a leading American city in respect to the use of motor fire engines. That city already has purchased three Webb cars.

NINE ENTRIES FOR LOWELL RACE

Three Foreign Machines Included—Noted Drivers Who Are to Compete—Very Fast Time Expected.

What undoubtedly will be the biggest of the Labor Day motoring events, is the Lowell (Mass.) 250 miles road race over a 10 miles course in the Merrimac valley, for which nine entries have been made. It bids fair to come up to the fullest expectations of the Lowell Automobile Club, as on account of the short course the contest committee limited the number of entries to 12 and there is a possibility of a full dozen cars starting. Of the nine already entered, three are foreign machines and six are American made. Two Isottas and a Fiat will represent Europe, the former being driven by Louis Strang and Al Poole, of Savannah and Briarcliffe fame, while George Robertson will handle the Fiat.

The American entries consist of two Knox cars, two Buicks, a Simplex and an American. One of the Knox cars will be piloted by Charles L. Bissell, a French driver who has driven abroad and at Ormond, while the other will be guided by either Albert Dennison or William Bourque, of Springfield. Robert Burman, who has seen a few 24 hour and track races, and C. S. Smith will drive the Buicks, while Frank Lescault will stick to the wheel of the Simplex and A. J. Andrews the American. Several of these drivers have been out in the chill gray dawn for practice trials the last few days and seem favorably impressed with the course. Louis Strang made the circuit for the first time on Saturday last and stated that he expects to be able to make between 80 and 90 miles an hour on the straight stretches of the course. Other more conservative drivers say that an average speed of 60 miles an hour will be about the maximum rate. The race is to start at 10 a. m., and the contestants will be sent away at one minute intervals, from which it will be seen that the last of the drivers will scarcely be started before the others commence to circuit past the grandstand.

Considerable time and money has been spent to oil the course and put it into shape and bank the turns, including the "hairpin" at Tyngsboro. A wire fence on each side of the road extends the entire length of the circuit to keep the foolish ones from getting under the wheels. The regular Lowell police force will patrol the turns and points liable to be congested and a large number of special police have been hired to take care of the balance of the course. The race is to be run rain or shine.

All roads crossing the course will be closed to public travel at 8 o'clock on the morning of the race, but the main course will be kept open until the time for starting the contests, which will be two hours

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later. There will be telephone service with nine stations disposed along the course, so that in case of accidents it will be possible to signal from all points at once. The grandstands, with a seating capacity of 10,000, are situated three-quarters of a mile beyond where the finishing point of last year's race was, which will allow the spectators to view the race at a point where the contestants are expected to make 90 miles an hour. Back of the stand and close to the Merrimac river, there is a level space which will be reserved for the machines, drivers and mechanicians.

The National Association of American Automobile Engineers will attend the race in a body, and, according to President John O. Heinze of the Lowell Automobile Club, under whose auspices the races are being run, there will be at least 150 present.

New Route to the Water Gap.

Automobilists who have followed the circuitous route to Delaware Water Gap will be pleased to learn that the new Slate Hill-Greenville-Port Jervis State road leading to the Shawangunk mountain was opened to travel this week. It is the most expensive and best constructed road in Orange county with easy grades and smooth macadamized surfaces and passes through one of the most beautiful regions in the East. The road is nearly 13 miles in length and cost $137,000 to build. It is the most direct road into the Delaware Valley and will be the main road to Delaware Water Gap. The acceptance by the State has not been made, but the contractors now allow public travel over it so that by this route automobilists can make the run from Newburg, the eastern end of the county, to Port Jervis, the extreme west, entirely on State roads, except a short distance from Monroe to Chester. The route over the State is completed from Tuxedo to Port Jervis.

Oldfield Gives Kalamazoo a Show.

Before a crowd of 3,000 persons at Kalamazoo, Mich., on Sunday, August 30, Barney Oldfield, up to his old tricks again, "lowered his one mile record for Michigan tracks." He covered that distance in the fast time of 58¼ seconds and considering that the track at Recreation Park was in none too good condition, Oldfield's performance is noteworthy. His previous Michigan record was made at Detroit, when he reeled off a mile in 0:59⅕.

"Rubbernecks" for Sightseers in London.

American sight-seeing or "rubberneck" wagons have invaded London and are highly popular with the out of town visitors and with tourists from the United States. Their bulk makes them the object of spirited verbal attention from the London 'bus drivers, who have further ground for giving play to their caustic tongues because the motor wagons are taking away a considerable proportion of their sight-seeing and fee-giving patronage.

UTILIZING WORKMEN'S BRAINS

How Chalmers Encourages Employes to Give Thought to Their Work—Prizes for Available Suggestions.

Getting the benefit of his employes' brains as well as the work of their hands, always has been one of the business principles of Hugh Chalmers, president of the Chalmers-Detroit Motor Co.

In order to make it easy for his employes to give to the company their ideas about the work that they are doing, Mr. Chalmers



REGISTERING HIS SUGGESTION

has just inaugurated in the Detroit factory a suggestion system.

Throughout the factory are placed small registers, such as are used in many stores for making duplicate copies of bills. The employes are invited to write on these registers any suggestions that they may wish to make regarding their own work or the work of any department, where they see a possibility of improvement.

The register makes three copies of each suggestion. One copy is retained by the employe, the second is dropped by him into a small metal box placed at the side of the register, and the third is locked up in the register for a permanent record. The suggestions in the boxes are collected at intervals and taken to the general manager's office, where they are given careful consideration. When investigating the suggestions to find out how valuable they are, the name of the suggestor is never given out, so that there is no possibility of creating a jealousy in the departments, or of allowing a foreman to think that some of his employes are complaining against his methods.

Prizes are offered for the best suggestions submitted. These prizes are awarded quarterly and are as follows:

First prize—$25 for the best suggestion adopted.

Second prize—$15 for the second best adopted.

Third prize—$10 for the third best adopted.

Fourth prize—$5 for the fourth best adopted.

In addition to these prizes, the sum of 50 cents is paid for every suggestion adopted, no matter whether it is good enough to win a prize or not.

This suggestion system has been welcomed by the employes, and the company receives every week a number of suggestions as to improvements in mechanical operations, improvements in methods of doing work in the factory, and improvements in office system.

Practical Test of Splash Guards.

Outside splash guards for protecting passersby from unpleasant spatterings of soft mud or puddle water are engaging so much attention from inventors across the Atlantic that means of testing the different devices offered, to determine their respective efficacy, have had to be devised. The most convincing method hit upon as yet is to have a man don a pure white duster and stand beside the path of a car as it plunges through a pool of mud and roadwater. The first trial is made without the splash guards, and the results of their omission are recorded in a photograph of the bespattered once-white garment worn by the victim at the roadside. The second trial finds the same man encompassed in another white duster like the first, and if the splash guards, which are this time mounted, are as good as they are intended to be, the subsequent photograph of the dust coat will show it spotless and unharmed.

Lost Power Caused by New Valve.

Marked loss of engine power sometimes follows the fitting of a new inlet valve where the latter is of the automatic type. Such a sequence of cause and effect generally indicates that the spring of the new valve is too stiff and should be eased up to correspond with the old adjustment. In the case of the fitting of a new exhaust valve, a diminution in the power probably has its cause in too weak a valve spring, allowing the exhaust valve to open slightly on the suction stroke.

Belgians Organize Automobile Express.

An express company has been organized in Antwerp, Belgium, with a capital of $300,000 to do a general express business in the city. The enterprise will be known under the title La Compagnie Generale Amersoise de Transports. The transportation of articles will be done entirely through the medium of motor vehicles.

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HEAVY VEHICLE TIRE PROBLEMS

Michelin Discusses the Relative Merits of Solid and Pneumatic Construction—Deductions from Experiments.

It is generally admitted that pneumatic tires are unsuitable for use on commercial motor vehicles of the heavier type, because of the enormous strains which must be resisted and the absolute necessity of economy in upkeep. Just what considerations determine the boundary between economical use of the air tire and the enforced application of the solid substitute, however, probably few persons outside the tire industry itself are at all aware. In a paper recently read before the French Society of Civil Engineers the well-known tire manufacturer, M. Michelin, discussed the subject and offered some valuable suggestions on the proper design of tires for heavy commercial vehicles.

The pneumatic tire has hitherto been found useless for heavy weights, for two reasons—explains the Scientific American, in an abstract from this source. The largest pneumatic tire cannot safely carry more than 1,500 pounds and the pneumatic is inferior in economy, owing to a fact which many experiments have permitted M. Michelin to express in the following empirical law:

"The total travel of which a tire is capable is inversely proportional to the cube of the weight which it carries." For example: If the load is doubled the average wear and tear will be multiplied by eight, and an increase in weight of 5 per cent. will cause an increase in wear and tear of 15 per cent.

So, every attempt to increase the load has been followed by such rapid wear of the tires that their employment had to be abandoned.

Hence, it has been found necessary to retain the solid rubber t're in order to lessen noise and soften shock.

At present the situation of the heavy weight vehicle is precisely the position occupied by the touring car before the adoption of pneumatic tires. The vibrations and shocks transmitted to the chassis and to all the mechanism rapidly wear out the motor and gearing. Of 162 vehicles possessed by the Paris Autobus Co., not more than 97 are ever in service at once, although the repair and maintenance shops employ a force of 200 mechanics. Yet the oldest of the vehicles has been in service only eighteen months.

The problem of tires for heavy vehicles is therefore still unsolved. To prove how unsatisfactory is the solid rubber tire, M. Michelin cites the following experiment: A wheel was caused to rotate with the tire velocity of 15½ miles an hour while carrying a load of 1,100 pounds, and furnished alternately with a pneumatic and a solid rubber tire 2½ inches thick, which was in contact with the broad tire of another and larger wheel upon which different small obstacles could be fastened. The displacements of the hub of the small wheel were inscribed in their true dimensions by a style upon a rotating cylinder. Vibrations amounting to ¼ inch for the solid, but only 1-50 inch for the pneumatic were recorded, even when no obstacle was present. These vibrations are caused by a slight eccentricity of the large wheel. They give an idea of the inferiority of a solid tire, which is confirmed by the passage of the wheel over obstacles. The first obstacle was a semi-cylinder about ⅘ inch high. This produced an elevation of the wheel amounting to 0.16 inch with the pneumatic and 0.40 inch with the solid tire. In other words the pneumatic absorbs four-fifths and the solid tire only one-half of the obstacle. The difference increases with the size of the obstacle. On an elongated block ⅘ inch high, the rise was 0.36 inch with the pneumatic and 1.16 inches with the solid tire. A semi-cylinder 1.2 inches in height caused the wheel to rise 0.28 inch with the pneumatic, and 1.04 inches with the solid tire. Finally, with an elongated obstacle 1.2 inches high, the wheel rose 0.44 inch with the pneumatic and 2.36 inches with the solid tire. In every case the ascent of the wheel, carrying a pneumatic tire, is less than the height of the obstacle; while with the solid tire the ascent is always greater than the height of the obstacle, unless this is very small. In endeavoring to repeat the experiment with the solid tires, the steel axles of the two wheels, whose diameters were 1.8 and 2.4 inches, became sprung. In order to avoid breakage the manufacturers of heavy automobiles have been obliged to reinforce their axles. M. Michelin states that he has seen axles made of I bars of forged steel of a height of 9 inches. For heavy-weight articles Michelin recommends the multiple pneumatic. It may consist, according to the weight which it has to carry, of two or more pneumatics, placed side by side upon the same wheel. For heavy vehicles, we are not concerned with high speed, and the construction must be adapted to give great strength and supporting loads. The envelope of the multiple tire, therefore, would not be suited for a touring car. It might be feared that two or more tires exposed together to the inequalities of the road would wear out almost as soon as a single tire, but that is not the case. Twin tires are found at last from three to seven times as long as single tires.

This is chiefly due to the law which we have already quoted, but there are other reasons. The twin tire suffers less from the brakes because their pressure is distributed over double the surface. Seventy-two experiments have proved that, at the same pressure, a pneumatic of small diameter absorbs obstacles better than one of large diameter.

REGISTERING HEAT OF CYLINDER

Prof. Hopkinson Devises Apparatus to Give Direct Temperature Readings—Application of an Electrical Principle.

In the study of what takes place in the cylinder of a gasolene engine numerous satisfactory forms of apparatus have been devised for measuring the pressure at all stages of the cycle operation, but the matter of definitely registering the temperatures attained has presented more difficulty. A recent advance along this line, however, has been developed by Prof. Hopkinson, of Cambridge University, who has devoted a great deal of attention to the theory of explosion motors. His device is of much a character as to give direct temperature readings of the heat inside the cylinder. The principle of the apparatus is founded on the increase of the electrical resistance of copper with the increase of temperature.

For the purpose of his tests, Hopkinson has built a vertical cylinder of cast iron, 12 inches in height and diameter, the interior of which is lined wth wood and the top and bottom covered with cork. In the cylinder is introduced a helical ribbon of sheet copper about ¼ inch wide, with an air space of 1-25 inch between the turns. Coils of the copper ribbon are also placed at the top and bottom of the explosion chamber, forming part of the circuit with the helical coil on the sides. The increased resistance offered the passage of a current through the strips of copper during the period of an explosion provides data sufficient for an accurate calculation of the increase of temperature.

The principal circuit consists of a set of 50 accumulators, a group of lamps and the coil of copper ribbon. Shunting the cylinder coil is a second circuit which includes a galvanometer and a resistance. Again, a third circuit, connected to shunt the resistance, is introduced, it having 6 accumulator cells and a resistance of its own. The lamps and the resistances are so adjusted that a current of 8 amperes flows through the lamps, while no current goes through the galvanometer. The cylinder having been filled with an explosive gaseous mixture and the charge ignited, the heat generated causes a small increase of the electrical resistance in the cylinder coil of copper which produces a proportionate increase of the difference of potential of its poles and sends a current through the galvanometer proportional to these changes. The delicacy of the galvanometer is such as to render mechanical means of registering its action impracticable, so that its deflections are recorded by a beam of light reflected from a mirror on the end of the instrument's needle to a sheet of photographic paper.

In connection with a pressure gauge on

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the top of the cylinder, which shows the pressure at each instant of the explosion, the temperature records give valuable information as to what occurs during the power stroke of a motor. Means for varying the compression under which the explosion takes place are provided in the apparatus, and the experiments which are being conducted will throw a great deal of light on many of the problems in gasolene engine practice.

Novel Mounting of Copper Flanges.

Copper cooling flanges for air cooled motors have long offered a problem to designers and manufacturers in the matter of their application, the desideratum being to have the union of the copper with the iron as close and complete as possible in order that the conductivity of the copper in carrying away the heat from the cylinder may be assisted to the utmost. Elements of novelty are claimed by R. D. McAlvay, of Los Angeles, Cal., for a method of mounting the copper flanges which he has incorporated in a new car of his own design, which was built specially for use in the Western deserts.

The flanges, which are mounted vertically along the sides of the combustion chamber, are cast integrally with the gray iron cylinders, without, however, any melting of the copper. The copper plates or flanges do not penetrate to the interior wall of the cylinder, but have their bases imbedded sufficiently deep in the iron to give them all necessary security. The tops of the cylinders have no flanges, being flat and mounting the inlet and exhaust valves operated by overhead tappets. A further departure from standard practice is the placing of the valves fore and aft instead of at the sides of the cylinders, and the valves are so grouped on the four cylinders that the inlets in each pair are nearest each other, to equalize the manifold flow from the carburetter.

Emergency Remedy for Failing Clutch.

Nothing in connection with driving an automobile is more annoying to the operator than to have a clutch which fails to hold. When this condition exists various disagreeable features ensue; the motor races, the friction created between the clutch and its seat has a deteriorating effect on both parts and the car fails to respond to the action of the motor, which ofttimes places the vehicle and its occupants in a dangerous position. When this condition exists, if the connection is of the friction cone type, a simple temporary remedy lies in the use of Fuller's earth. The face of the leather clutch straps should be cleaned thoroughly with gasolene; then the straps should receive a liberal application of Fuller's earth and if the clutch seat has been carefully wiped until all oil and grease is removed, it will be found that the objectionable slipping has been reduced to the minimum or even entirely removed.

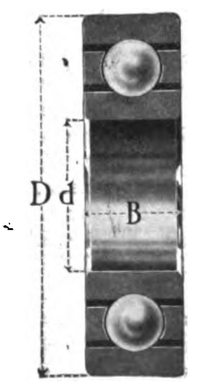
MORE BALLS IN THE BEARING

New Foreign Device Provides More Space in the Separator—Special Advantages That are Claimed.

Refinements in ball bearing construction continue to engage the manufacturers and the improvements along this line, while presenting no introductions of radically new principles, present evidence of the thought and care expended in giving recognized theoretical advantages and considerations a practical commercial and mechanical em-



bodiment. An instance of the sort is a new type of "silent" annular ball bearing, possessing some special advantages over preceding types by the same makers, has been produced by Fichtel & Sachs, of Schweinfurt, Germany, in which the distinctive feat-



ure is a separator so formed as to permit almost the entire space to be filled with balls. Having more than the usual number of balls for a given size, the bearing is claimed to effect a wider distribution of the load among several balls instead of concentrating it on three or two, or even on a single ball, as is said to be the case with some types of bearing.

The separator is die cast, of a special alloy. As shown by the accompanying illustrations, it is split in the central plane of the balls, and the two halves are united by brass wires of dovetail section, which are inserted in dovetail shaped grooves and have their ends clinched over into notches in the sides of the separator. The reduction of the number of balls used, as compared with the "full" type of bearing, is with this separator only one ball.

The method of introducing the balls resembles that used in former types of the F-S bearings, as imported by the J. S. Bretz Co., of New York, being distinguished by the use of angular entering grooves in the sides of the inner and outer races. Contrary to a more or less general impression, these side grooves are not quite so deep as the races themselves, so that after the bearing is half filled the remaining balls are sprung in under some pressure. Once in, they would be prevented from any tendency to escape by the angularity of the grooves.

This construction presents obvious advantages over that in which the races are so shallow that the balls may be sprung in from any point, as the latter are frequently too springy to endure severe end load. The deep ball races and the use of a greater number of balls which the side groove method of introduction and the new type of separator permit, result in a capacity for carrying loads of from 1-10 to ¼ of the radial load capacity. The makers of the bearing lay special stress on the high quality of the materials used and the extreme accuracy of the workmanship and sizing, since to realize the advantages of this type in actual practice perfect uniformity of the size of the balls and exactitude in the formation of the races is manifestly necessary.

Improving Methods of Heating.

In the design of heaters for cold weather use, which give promise of great popularity this fall, as numbers of private owners are preparing to install them, it is to be remembered that if the exhaust from the motor is used it will have a very unpleasant sound if piped directly into coils or chambers placed in the flooring of closed bodies. Town cars and limousines thus equipped have been found to be very disagreeable in this respect, the pulsations of the exhaust having a magnified effect that not only makes conversation difficult but is extremely wearing on the nerves. This objection has been circumvented in some cases by the installation of a separate hot water circulation system, taking its heat from the ...nging of the exhaust on water c... underneath the body. Another method, where consideration for the comfort of the passengers outweighs the slight loss of engine efficiency involved, is to conduct the exhaust through inside coils of generous pipe diameter after it comes from the muffler. In this method, the muffler itself is enclosed in a receiving chamber for the exhaust gas, the chamber serving as an equalizer, after which the hot gas finds its way in a fairly steady flow through the coils of the interior heater and out through a lead of pipe underneath the car to the open air.

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MOUNTING THE CONE CLUTCH

Proper Method for Safeguarding Against the Effects of Disalignment—Details in the Work of Assemblage.

One fruitful cause of dissatisfaction with the otherwise satisfactory cone clutch has been that with certain of the more common methods of mounting, any possible distorsion of the clutch shaft, springing of the

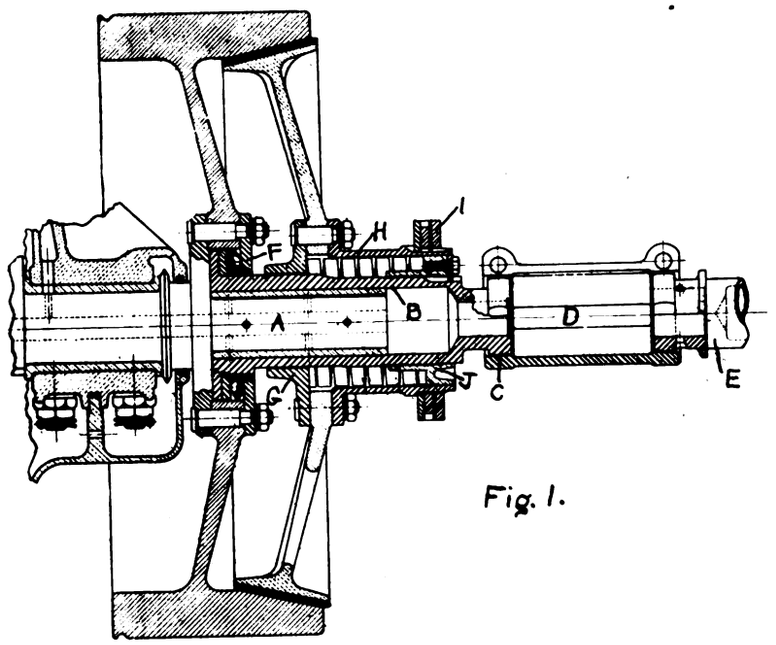


Fig. 1.

cone itself, or disalignment of the clutch and crank shafts, would cause it to engage unevenly, causing jerky starting action, dragging and "spinning" when out of engagement, and generally imperfect action. In the method of mounting the cone, then, rests the chief problem in the design of this type of clutch. As was indicated in the Motor World's announcement of the specifications of the 1909 Pope-Hartford car, last week, the design of the new clutch contains elements of general interest. That these relate more particularly to the method of assemblage and the way in which the device is safeguarded against the effects of disalignment a study of its details will show.

As is indicated in the accompanying illustration, Fig. 1, the principle bearing of the clutch on an extension of the crank shaft, A, is very long. The hollow clutch shaft, B, which immediately surrounds it, a bushing being supplied to guard against abrasion, has the advantage of being given only a rotary motion, the longitudinal movement of engagement being entirely independent of this member. At its rear end it is necked down and formed into a square shoulder, C, which engages the squared hollow sleeve, D, into the opposite end of which is fitted a corresponding member in the transmission shaft, E. The sleeve being split along one side and fitted with shims, it is possible to take up any wear which results from the working of the universal joint thus formed, by means of the bolts which clamp it together at either end.

The forward end of the shaft, B, is flanged outwardly and butts against the face of the flange upon which the fly wheel is mounted, a free washer and ball thrust bearing being interposed between its forward face and the collar, F, which is fastened to the fly wheel by through bolts. By this means the clutch shaft is held in positive re-

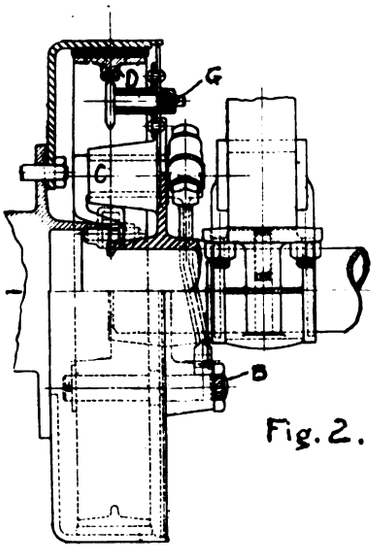
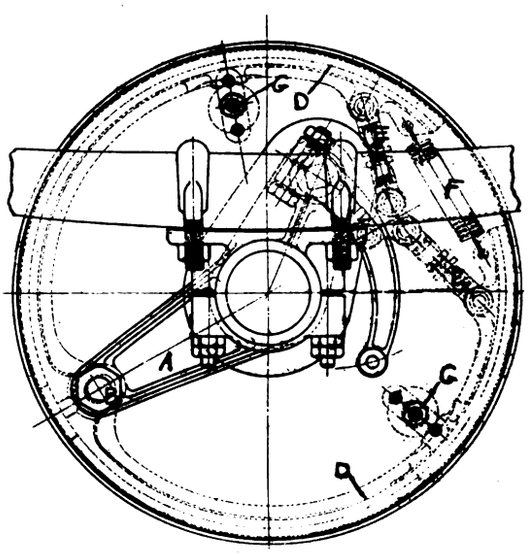


Fig. 2.



lation to the crank shaft, its alignment being preserved by its great length of bearing surface and its end thrust being taken up by a plain bearing on the one hand, and a ball bearing on the other. Up to this point the device is lubricated directly from the crank case—an important point to note. A duct leading through the rear journal of the shaft is tapped at one point to register at every turn with the oil feed to the bearing. By this means oil is carried through other ducts to the bearing surface by centrifugal force.

The outer side of the sleeve, B, is squared and on it is mounted the boss, G, upon which the cone disc driving member is bolted. Upon the back side of the driving cone is bolted the sleeve, H, the rear end of which carries the adjustable collar, I, which is employed in disengaging the device. Within the sleeve, and threaded on the clutch shaft is the nut, J, suitably locked in position. Between this nut and the rear face of the boss, G, is the engaging spring, which takes its thrust from the clutch shaft itself, the stress being taken up by the ball bearing already noted. It will be observed that the cone group always rotates with the clutch shaft, and is given only longitudinal motion with relation to it The double movement which is necessary in any clutch —that is to say, the rotary movement with relation to the crank shaft which occurs during release, and the longitudinal movement which occurs at the moment of release or engagement—are thus segregated and is carried on independent bearing surfaces.

In addition to these precautions against disalignment another and still more radical feature of the same sort is found in the method of actuation. Instead of a plain yoke to engage the collar, I, two independent arms are used. The pedal connection to these arms is by means of a linkage terminating in a short balance beam each end of which is connected to one of the arms, while the pull of the pedal is applied at the center. By this means the drag on the flange is absolutely equalized, and even should the pedal rocker shaft be out of alignment with the motor, the clutch would still be drawn out in a straight line, and would not tend to "cock up" and drag on one side.

Another new feature of the same machine, which also is noteworthy, is the method of

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adjusting the emergency brakes, which is unusually generous in its application. As shown in Fig. 2, the mechanism, which is of the expanding type, is actuated by a toggle arrangement instead of the more conventional cam movement. The spider, A, which is rigidly attached to the axle tube carries upon one of its arms the anchor bolt, B, and upon the other the actuating rocker shaft, C, which projects through the cover plate. The spring seat being loosely mounted on the tube, it follows that the torque of the brakes is taken up entirely by the same member, which receives the torsional driving stresses and which was described in detail in the previous article already mentioned.

The brake shoes, D-D, are expanded by means of the toggles, E-E, worked by a triangular link connected with the internal rocker arm of the shaft, C. In contrast to the ordinary system of cam expansion, this arrangement provides adjustment in each of the toggle members, and makes it possible to adjust for unequal wear on the two shoes, should this occur, also providing for a nicety of adjustment which is not found where the entire regulation must be done in the drag rods outside the brake. The shoes are normally held in the off position by means of the spring, F, which draws them against the two stops, G-G.

Another adjustable feature is here introduced in the design of the stops, which are in the form of circular discs eccentrically mounted on short studs projecting through the sides of the cover plate and locked in position. A slight rotation of the studs permits the bearance of the shoes to be regulated so that exactly the same amount of movement always will be required to throw them into engagement. The utility of this provision, when coupled with the adjustability of the individual toggles, will be at once apparent.

Still another point which should be mentioned is the method of mounting the drums. Instead of being attached to the hub flanges, as is commonly the case, the brake drum is mounted on the hub itself, the latter extending inwardly as far as the center line of the brake shoes to give good support for the wheel and brake. By this means less strain is brought to bear on the hub bolts than with the more common arrangement, and the wheel is less liable to work loose in consequence.

Loose Check Nuts Invite Trouble.

Loose check nuts on the connecting rods in the braking system may become the cause of a serious mishap if not taken up in season. When the check is removed from the turnbuckle or other adjustment which it is supposed to guard, the tendency of the vibration is to loosen the adjustment of the bands. As this may ocur while the machine is running, the possibility of having the brakes fail owing to slack adjustment and without any previous warning, is well worth considering.

THE SECRET OF GOOD SURFACING

Essential Value of a Liberally Built Foundation—Suggestions for Effective Laying on of Primary Coats.

With the advent of the automobile there has come a demand for the best sort of surfacing, and, for the most part, nothing short of this will apparently suffice.

The ordinary processes which have obtained outside the strictly high grade city custom shops are inadequate to meet the demand for the more excellent surfacing necessary to produce in the wide-reaching automobile a work of art. And this surface, it has been further demonstrated, cannot be built up on an impoverished foundation of primary coats, whipped together by the doctors of the old school of surface magic, says the Carriage Monthly. The foundation must be liberal, and composed of the best sinew and substance put together by the manufacturer. And coming to the part, foremost among all, which the painter plays in this surface making practice, we find that a good quota of coats must be used. Above the primer, confining our attention now to body surfaces, should come at least a couple of strong, supple coats of lead, perfectly laid, to be followed by at least five coats of roughstuff. Upon metal surfaces which have many uneven places in them, it will even be found necessary to apply a greater number of coats in order that in rubbing the roughstuff a perfectly level surface may be secured without cutting the higher parts dangerously close in order to reach the naturally lower ones.

However, we incline to the belief that upon all metal surfaces, which through processes of construction, show dents and depressions, markedly along the line where the panels are attached to the frame work with pins, draw puttying should be resorted to over all existing shallow places. The work of reaching the proper surface both in point of quality and of levelness is thereby rendered very much easier.

The sum of the whole matter of surfacing with roughstuff consists in getting together such a substantial body of pigment that the surfacing down to an absolutely level and smooth plane may be done without cutting any part of the foundation dangerously close to the basic structure beneath.

And where this is accomplished we deny the need of any 'stopper" or other coat being interposed between the body of roughstuff and the color coats. Technically, the "stopper coat" was designed to impart to the rubbed surface of roughstuff an impalpably fine, intact, close-grained film, through the medium of which the coats to come after were to be absorbed in no essential degree, thus sustaining them in the full strength of their power entirely above the primary foundation.

Nevertheless, latter day foundation building, as expounded and demonstrated by the leading members of the craft, has proven the undisputed lack of necessity of any "stopper" coat above the roughstuff. Certainly it is true, and is capable of proof along any of the avenues of American cities of the first class, that present day automobile and carriage finishing is the equal of, if not superior to, the finishing of previous times.

The massive contour and sweep of automobile surfaces naturally exact a fairly minute attention to every least detail of surfacing. Not long since the writer, in touring a certain large auto paint shop, had his attention called to a workman engaged in putting roughstuff upon touring car bodies. The coarse pigment on some bodies was being laid off with horizontal brush strokes, on others with vertical strokes, and on still others with angle strokes. He was advised that the direction of these angle brushings was reversed in regular order, and by their employment, along with the horizontal and vertical strokes, the filling pigment was brushed in four different directions, thus giving a foundation of the closest possible texture, more compact, and with a more uniformly distributed flow of pigment. In similar manner the lead coats leading up to the foundation of roughstuff are, in the above shop, laid at right angles one with another, the reverse coat scheme being in this way carried through from primer to the guide coat atop the roughstuff.

Superior skill, and the diligence of Jacob of old, are, in the final review, the chief part and parcel of all the issues reverted to above in the enforced reign of fine automobile surfacing.

Effect of Speed on Fuel Consumption.

Experiments relating to the effect of speed on fuel consumption constitute a favorite pastime of many investigators at present, and although it has long ago been shown that the rate of fuel consumption per mile is materially increased with increases in the speed, the particular effects obtained with different sizes and types of motors affords the opportunity for each experimenter to obtain data which is of value as a contribution to the whole subject. Recent tests of this character have been tried with a six cylinder Italian Napier of 40 horsepower, the car being fitted with a measuring tank having a calibrated float rod so that the contents of the tank could be seen at a glance from the driver's seat. Four tests were made at as nearly constant a speed as possible over a selected stretch of road about 7¼ miles in length. The average speed maintained for each of the four tests was 19.2 miles per hour, 27.8 miles, 37.8 miles and 43.6 miles per hour, respectively, and the corresponding fuel consumption figures worked out at 19.95 miles, 16.2 miles, 14.2 miles and 12.9 miles per gallon, respectively.

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TO SETTLE THE QUESTION FOREVER

Chicago Magazine Editor Will Decide Which is Best Car and Tire—He's a Philanthropist, He is.

No prospective buyer of an automobile need worry after October, as regards what make of automobile is the best, for that momentous question is to be decided definitely beyond all shade of doubt by a little heard of Chicago monthly magazine, which gives "advice to investors," and prints other such stuff. Not only will this magazine decide which is the best make of motor car, but also the best make of tires and speedometers. These three articles are definitely specified. The spark plugs, gasolene and lubricating oils probably will be settled later.

The editor of this Chicago publication apparently is bulging with benevolence. His scheme of determining the most meritorious product is to be so "legitimate" that he absolutely refuses to accept any advertising contracts from any manufacturer! This is "so that there can be no question of influence in the decision." The publishers, however, very graciously will condescend to furnish the manufacturer whose product makes the best showing, with all the extra copies of the magazine he may require—at a certain cost, of course.

In a letter which the Chicago editor has sent to numerous manufacturers, he says: "There is no question that the final decisions will mean a tremendous advertisement for the best car and accessories and a number of manufacturers have already assured us that they will use extra copies should their product show the best." Then follows a long list of cars and tires "being considered."

Just how the editor-gent expects to reach the important decision, which will settle the perplexing problem for the pee-pul, is interesting. He has spared no expense to send representatives to New York, Philadelphia, Baltimore, Washington, San Francisco, Keokuk, Frozen Dog, Ariz., and elsewhere for the purpose of "gathering data." When the data is all gathered, it will be carefully compiled and the editor then will decide the fateful issue. Buy the October number! The milk in the cocoanut is contained in the "extra copies." The "extra copy" scheme is a well ripened one.

Where Motoring is Discouraged by Law.

In contradistinction to the law of New York State which holds that an owner of an automobile is not responsible for damage done by his car when it is not being operated under his orders, is the law of Austria, which holds that there is no limit to the amount of compensation which may be exacted from a motorist for damage caused by his car. In Germany the damage limit is fixed at $12,500, but in Austria any sum may be collected, and in view of the notorious hostility of certain districts to motorists, a fortune might easily be lost on a single trip.

The secretary of the Vienna Automobile Club says that the position of motorists will be most serious if the law is rigorously enforced. Dr. Emil Frischauer, a Vienna lawyer, who has studied the measure, in commenting on its provisions said, "there is but one avenue of escape open to the motorist, and that is to evade the law by the formation of limited companies.

"Several motorists will join to form a company, each subscribing a certain sum, say, $5,000. A company with five members will thus have $25,000 at its command, and will purchase the cars of the five members, giving $5,000 for each. The company now becomes liable for all damage done by all the cars, and, being a limited liability concern, it is only able to pay fines or compensation to the limit of the funds in hand. Then it becomes bankrupt. Dr. Frischauer considers that such a company would be in a chronic state of bankruptcy, but this would be the only way of evading the law."

The Anti-A. A. A. "Secret" is Out!

At last the "secret" is out! One of the earliest and most confirmed and persistent of the race promoting press agent and "auto editor" critics, who has a few personal grievances of his own, finally has pointed out what he describes as "the sore and weak point" of th A. A. A. It consists of the fact that club representation being the basis of A. A. A. government, a few active members in each club are able to influence the election of the club delegates; It is as clear as mud, therefore, that the A. A. A. should be rent asunder and hanged to a lamppost for permitting such a dreadful state of affairs. But it will be a capital idea if the critics will now point out a club of any sort in which this is not always the case and also indicate how any national organization can alter such a state of affairs in any club while men remain human.

New York "Outlaws" Play the Usual Trick.

As is usual in movement of the sort, in their efforts to bolster up their very lame cause and to attract a gate to their 24 hours race at Brighton Beach next week, New York's little "outlaw" Motor Racing Association, which has become a corporation, has been making free use of a number of respected names. They gave out that Charles Jerome Edwards, president of the Long Island Automobile Club, would act as referee of the outlaw affair and that among the judges would be Charles J. Swain, of the Quaker City Automobile Club. As soon as the news reached those gentlemen they lost no time in repudiating and condemning the unauthorized use of their names, and in expressing their opinion of the attempt to connect them with the "wild cat" money making scheme.

ENDURANCE RUN, FAMILY STYLE

California Manufacturer Proves that It is Possible to Interest the Private Owners—Run Covered 1,100 Miles.

As a demonstration that private owners can be persuaded to take part in long tours or endurance contests when the sshedule is arranged with a consideration for human comfort and not merely to break down the scores of manufacturers' teams in competition, the 1,100 miles "Tour of the Tourists," which ended at Los Angeles, Cal., on Saturday, the 22d ult., affords a conspicuous illustration. One of the features of the tour was that it was participated in not only by hardy road drivers of the do-or-die type, but the wives and children of the entrants were conspicuously present.

Mild rivalry, sufficient to add interest to the proceedings, was provided by a system for awarding perfect scores to those cars which arrived at all controls on time, but the itinerary and time allotment for each day was generous and the cars being all of one make, the Tourist, the competition for perfect scores was purely one of careful driving.

The entire trip consumed 10 days, the start being made from Los Angeles with 32 cars in the line. As the caravan made its way up the coast to San Francisco, more machines joined in at different points, so that the arrival at the latter city found the tourists about 50 strong. The charms of San Francisco were such that when the return to Los Angeles was scheduled only 21 of the full distance tourists returned, 12 of them making perfect scores.

Connecticut Warns Rhode Islanders.

Warning Rhode Island motorists not to kill the goose that laid the gilt-edged egg, Secretary G. K. Dustin of the Connecticut Automobile Club, has written a letter to the members of the Rhode Island Automobile Club, regarding motoring across the State border. It reads as follows:

"We have had our attention drawn to the fact that a great many cars outside of Connecticut are passing through here at a rate of speed very much above the legal limits, with the mistaken idea that our law allows them unusual privileges in the matter of speed.

"There is no question but that Connecticut at the present time has a very liberal law concerning motor vehicles. It is the desire of all Connecticut motorists and, I am sure, of all motorists, to maintain the privileges we now enjoy, rather than have them removed by some future legislature.

"With that end in view I am asking you to warn your club members with regard to excesses on Connecticut roads, and to urge them to drive in a careful and orderly manner while in Connecticut."

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Standard Detachable Rim

Resolution passed by the NATIONAL ASSOCIATION AUTOMOBILE MANUFACTURERS at a meeting held in New York, August 5th, 1908.

"Whereas, the Standard Universal Rim, described in the report of "the Special Rim Committee, has been recommended by the committee "as mechanically satisfactory, be it

"RESOLVED that this association hereby adopts the rim so de- "scribed as standard, subject to the consummation by the Special Rim "Committee of satisfactory commercial arrangements with the patentee "and manufacturers."

At the above meeting all the detachable rims now on the market as well as proposed new rims were carefully considered.

THIS IS THE RIM



Standard Rim as Used for Clincher Tires



Standard Rim as Used for Dunlop Tires

Hartford Rubber Works Co.
Hartford, Conn.

Morgan & Wright
Detroit, Mich.

G & J Tire Co.
Indianapolis, Ind.

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TOO MUCH TO THE RADIATOR

The Lower Portion Useless is the Radical Conclusion of Two Foreign Experimenters—Results of Their Tests.

That the lower half of most radiators could be cut off and thrown away without impairing the engine running and that present radiator practice is very crude as compared with the scientific forms of fans and heat conducting methods that are available to motor car manufacturers are among the many radical conclusions arrived at by two disinterested experimenters, who in connection with studies of other motor car problems have been conducting a series of investigations into the big subject of radiator efficiency. The investigators are Dr. W. R. Ormandy and J. H. Lester, and the very interesting results of their laboratory proddings into the matter of engine cooling are given in the London Autocar. The attempts at tests were confined to radiators and were not extended to any complete test of the fan-pump-radiator system as a whole.

A distinct prediliction for the thermo-syphon system over the pump system exists with the experimenters by reason of the fact that their investigations show that the thermo-syphon system allows of the cylinders being warmed up to maximum efficiency temperature more quickly than with the pump system, the thermo-syphon system acting as a thermostat to maintain the temperature between narrow limits under widely divergent conditions of fuel consumption and speed. In the thermo-syphon system, the investigators maintain, the cylinder walls rapidly attain the temperature of maximum efficiency because not until this temperature is approached will there be sufficient hydrostatic head to cause that circulation which will bring a fresh bulk of cold water in contact with the walls. The rate of movement for the water is thus automatically regulated by the speed at which this temperature of efficiency is attained.

It is well known that certain portions of the cylinder tend to attain a higher themperature than the remainder and under the thermo-syphon method these portions of the cylinder are more rapidly reduced in temperature than the remainder owing to the increased velocity of circulation at these points. In the pump system, the experimenters declare, though the amount of water caused to pass through a cylinder casing may be vastly in excess of that passing in the case of a thermo-syphon system, it is possible to have strong local overheating, as the path of the water is conditioned by purely mechanical considerations, pockets and areas of comparative quiescence being of frequent occurence.

With a powerful pump and a good fan the temperature of the water when the engine is running on light load may never approach the temperature of maximum efficiency, and a pump system with its various parts so regulated that under ordinary conditions the maximum efficiency temperature would be attained, would be extremely liable to over heating under the less usual conditions of maximum load at low velocity.

In the experiments a honeycomb type of thermo-syphon radiator with fan was used, the total surface approximating 43 square feet, the front surface of the tubes being about 17 inches by 15 inches. This was mounted in connection with a 4x4¼ inch, two cylinder engine rated at 12.6 horsepower. The temperature of the radiator was obtained by inserting the bulb of a thermometer into the water entering at the top, while for ascertaining the temperature at the bottom the bulb was plugged into one of the lower air tubes. The rate of flow of the circulating water was ascertained from the gauge pressure set up in a glass tube with its open end facing the current of water entering the radiator, afterwards producing the same pressure from an external water supply and measuring the rate of flow into a gallon measure, the conditions as to levels being the same.

The principal observations were as follows: Temperature of water entering the radiator, 164 degrees Fahr.; temperature of water leaving radiator, 90 degrees Fahr.; rate of water circulation about 33 gallons per hour, or 110 seconds per gallon. Different conditions of running the engine, from light work in the experimental shed to heavy road work, showed little difference in these figures. It is assumed in the experiments that a cylinder temperature of about 160 degrees allows the maximum of power to be developed where the carburetter action is sufficiently perfect to introduce the charge in the form of a gas while a slightly higher heat is desirable where the fuel and the air enter the cylinder merely in the state of a mechanical division.

During the run of one of the tests, a period of about 25 minutes, the temperature of the radiator was observed at a point about half way down, and was found to be only 112 degrees Fahr. A comparison of the three temperatures, 164 degrees, 112 degrees and 90 degrees made it evident that the cooling effect was far greater at the top than at the bottom. This and other phenomena that were developed have brought the investigators to the conviction that the ideal design, however clumsy it might appear, would take the approximate form of a triangle with one side uppermost. Such a form, it is contended, in addition to taking advantage of the greater cooling efficiency at the top of the radiator near or at the water level, provides the best natural circulation, for it will give the greatest possible vertical head of relatively cold water in the radiator. It is asserted that such a form would permit of a construction much smaller and lighter than the usual types, for the same efficiency.

Among other improvements which the experiments suggest as practicable are the use of the sirocco type fan, which is in many respects more efficient than the conventional type. Its construction is that of a number of narrow blades arranged in cylindrical form parallel to the axis of rotation, like the bars of a squirrel cage wheel. The air enters at one or both the ends of the cylinder and is drawn out at the sides. Furthermore, radiators could be vastly improved, the experimenters believe, if instead of the air being brought through the radiators horizontally, as at present, it were introduced at the bottom and forced upward among the cooling plates or tubes, so that it would be coldest at the bottom.

Possibilities for the application of the Perkin tube system, a recent scientific development for conveying or conducting heat, are set forth as presenting food for thought. The system depends upon the evaporation of liquid from the lower end of a vertical or inclined tube or tubes sealed at both ends, the lower part of the tube being exposed to the heat and the upper to the cooling influences. The transfer of the heat from one end of the tube to the other is effected by the abstraction of the heat from the lower walls of the tube when the contained liquid is evaporated, and the dissipation of the heat as condensation takes place on the internal surface of the upper part, the condensed liquid running down to be again evaporated. Its use for cooling cylinder jackets might either be direct application to the cylinders or in connection with a special form of radiator. A suitable liquid and pressure in the tubes would make it possible to prevent any appreciable cooling effect until the temperature of maximum efficiency was reached.

In the course of other considerations in connection with cooling systems it is asserted that with the ordinary type of pumps it is almost impossible to prevent the introduction of grease into the circulating water. For the most part this grease is of a mineral origin and consequently of a non-saponifiable nature. This renders the task of removing the greasy film from the surface of the cooling area very difficult, because, unlike vegetable oils, mineral oils are not converted into soaps soluble in water by the action of caustic alkalies. From this, it is argued, it is wiser to use tallow or similar grease for the lubrication of the pump spindle, so that from time to time the water system can be thoroughly cleaned out by means of alkaline solutions. The remarkable influence exerted by even a microscopical thin film of grease in preventing the passage of heat through metal surfaces is well known to those who have studied the subject of economical steam raising but is little understood by most people. The decreasing efficiency which afflicts many pump cooling systems after the lapse of a few months' running is in many instances due to the formation of an oil film in the water jackets of the cylinders.

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PUBLIC GASOLENE SUPPLY TANKS

As Necessary as Drinking Troughs for Horses, Farson Tells Chicago Horsemen—The Idea Catching on.

Thirsty automobiles that want water or gasolene should have street fountains for their accomodation just as horses do, according to John Farson, the Chicago motorist who has been prominent in automobile club and legislative matters, and so strongly does Farson believe this to be the case that he almost broke up a meeting of the directors of the Oak Park horse show by urging that a part of the horse show surplus funds be used in erecting his proposed gasolene tanks. In fact the staid directors of the horse show fund almost fell over with surprise and indignation when the real significance of Farson's suggestion penetrated their full consciousness, and there was a torrent of acrid and heated remarks concerning the propriety of an association for horse uplift rendering such Quixotic service to suffering motor cars. But when Farson looked the directors over and pointed out that practically every one of them uses an automobile instead of horses, he was able to get a better hearing for his proposal.

It had been decided by the horse show directors to divide the profits of the last show into four portions, each of which was to be devoted to a public purpose. Three of these had been disposed of when the disposition of the fourth came up for discussion. When the difficulty of selecting a suitable method of disbursing it was encountered, Farson made his suggestion of gasolene tanks, and after the first excitement was over, succeeded in bringing many of the directors to his way of thinking, and it is not improbable that the money will be spent in Oak Park to erect the stations.

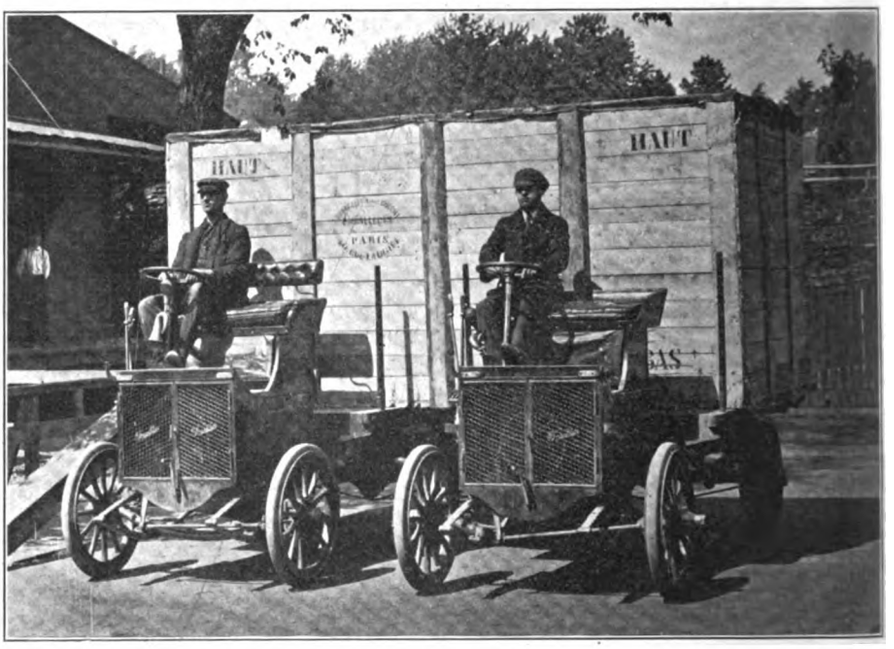
"If these tanks for the use of automobilists would be good for Oak Park," said Farson, in explaining that his idea had a wider application, "there is no reason why they should not prevail all over Chicago. We have municipal watering troughs for our thirsty horses—why not municipal gasolene tanks for automobiles? Such tanks would not only be a convenience, but a positive step in advance for the city and its suburbs."

No Automobiles in Meade County.

In contrast to other localities which are claiming the largest proportion of automobiles in relation to population, Meade county, in South Dakota, claims distinction by reason of not having an automobile owned within its borders. This circumstance is not due to any prevailing indigence, but to the fact that all motor car agencies are far away and the residents with money have not had their thoughts turned toward automobile purchase. The recent passage of several machines through the county, however, has started a local movement for a prize to the first man within the lines who will buy a car.

Working Motor Trucks in a Team.

"Some things can be done as well as others," is a saying attributed to Sam Patch, an old time celebrity, and it is strikingly verified in the accompanying picture. The driver of either of the pair of Franklin motor trucks might well have exclaimed "That's the limit!" when brought up against the proposition to move the huge package of freight shown therein. But "where there's a will there's a way," and the way evidently was found. It is apparent that two motor trucks could not be employed tandem fashion, as may be done with some of the horse drawn vehicles, so the big box was loaded upon the two trucks placed abreast. Then all that was necessary was for the drivers to co-operate with care in the manipulation of the wheel and the regulation of speed.



FRANKLIN MOTOR TRUCKS "TEAMING"

Highland Park Will Permit Banners.

In spite of the failure of the legal committee of the local automobile club to get permission to string banners or warning signs urging motorists to beware of the speed laws, Judge Housell, of Highland Park, N. J., later changed his mind and has notified the club that it may hang a warning. So radical has been his conversation to the value of the club's idea that he says he will put up the banner at his own expense if the club does not provide one.

In Indianapolis, Ind., nearly all the wholesale paper manufacturers employ motor trucks to carry their product to the freight yards. The power vehicles have proven more practical than those drawn by horses.

NO DAMAGES FOR SPOILED ATTIRE

State Disclaims Liability for Spatterings from Oil Dressed Roads—Massachusetts Attorney-General's Opinion.

In answer to a request from the highway commission of Massachusetts, the Attorney-General of the State has rendered an opinion on the subject of the State's liability for damages caused to wearing apparel which has been spattered by oil on oil dressed roads. The Attorney-General holds that as there is no law to cover the subject, there can be no liability on the part of the State. He is of the opinion that the statute limits the recovery of damages to "want of repair" and to "defects in the highway." He held that the application of tar or oil does not constitute a "want of repair" and the term "defect" is not defined in the statutes. Continuing, the Attorney-General says:

"In order to constitute a defect within the meaning of the statute it is necessary that there should be something in the condition of the highway, either by reason of its construction or want of repair or in the nature of an obstruction, which is dangerous to the safty of the traveler and not merely damaging to appearance of his attire or the conveyance in which he travels."

In relation to cases where there were signs showing that the road was under repair the Attorney-General holds that the only inconvenience occasioned was the necessity of seeking another route. He holds that even if the application of the oil was improper or negligent on the part of the contractor or the agent of the Commonwealth it would not constitute a defect in the highway.

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ANTI-SMOKE ORDINANCE STANDS

New York Park Board Sustained by Supreme Court Justice Dugro—Unqualified Decision in Test Case.

It is likely that the New York City park ordinance excluding smoking automobiles from Central Park and other parks will stand for a while, at least. Judge Dugro in a special term of the Supreme Court on Monday dismissed the writ of habeas corpus procured last Thursday in favor of William C. Tupper, a taxicab driver in the employ of the New York Taxicab Company, who was arrested on the charge of driving a smoking automobile in Central Park. The Court said that in his opinion the Park Board had not exceeded its general police power in passing such an ordinance and that it was not for the Court to determine whether or not the requirements of the ordinance were reasonable.

The New York Taxicab Co. sought to make a test case of Tupper's arrest and got out a habeas corpus writ before he had been arraigned in police court. Tupper was arrested while driving a taxicab containing Joseph H. Higgins, general superintendent of the company, and J. B. Kerr, counsel for the taxicab company.

Kerr tried to convince Justice Dugro that Park Commissioner Smith had exceeded his legal powers in making such an ordinance. The judge, however, said that the Park Board was in a better position than the court to determine what was a reasonable ordinance and what was proper for the regulation of the parks. Kerr contended that the ordinance was unreasonable; that it was too indefinite and did not impose any punishment for its violation. He said that it merely directed that smoking automobiles and cabs should not be used in the park.

Assistant Corporation Counsel George P. Nicholson insisted that the ordinance was a legal and proper one, and that having been duly filed, it carried with it the penalty provided for such ordinances provided by the city charter.

Justice Dugro overruled all the objections urged against the ordinance by Tupper's counsel.

"Who is to determine whether the ordinance has been violated?" inquired Lawyer Kerr when he heard the Court's ruling.

"Why, the police officer," replied the court.

Kerr remarked that it was placing a great power in the hands of the police, when the judge interjected:

"It is the same power that the police exercise and have to exercise in every case where a law or an ordinance is violated."

Justice Dugro then remanded Tupper to the jurisdiction of Magistrate Harris, who was sitting in Yorkville court, and who promptly fined Tupper $1.

"But, your honor," complained Tupper, who was sideflanked by his lawyer and employer, "no gasolene car can be driven without emitting some vapor."

"Then let them keep out of the parks," was the magistrate's advice as he called the next case.

The fine was paid, but there was some talk of an appeal.

Ducking Automobilists to Check Speed.

Out in Kansas a man by the name of D. A. Harrington recently devised a plan of his own to stop automobile speeding past his home. His scheme was an ingenious one and would have done credit to almost any small boy, for it consisted merely in squirting a garden hose at cars as they whisked by. Harrington had a whole bushel of fun, playing the stream of sparkling water on the many unsuspecting motorists and laughing with great joy every time he landed a good bull'seye shot and soaked a few people. Harrington calculated that automobilists would soon cease to drive past his Kansas City home, but this was an error of judgment, for the State of Kansas is now attempting to prosecute him on a charge of assault. For H. M. Beers did not relish Harrington's joke and filed a complaint against him.

The complainant's daughter, while out riding a short time ago with friends, was drenched. Accordingly Mr. Beers and his daughter insist that Harrington should be punished. The charge was not because of any damage sustained by the car or its occupants, but simply for the assault itself.

When the trial took place last week, 47 witnesses were subpoenaed in the case, many of whom were fashionable residents of the neighborhood, where the squirting took place—most of whom testified. Miss Beers and others swore that her automobile was running very slowly. It was an all-day trial, the jury being charged at 4 p. m. That night, the twelve men announced that the could not agree on a verdict, so tha justice was forced to grant a new trial. Meanwhile Harrington has suspended his squirting operation.

How Wareham is Checking Speeding.

Speed banners as a means of reducing the number of cars that rush through the town's main street at a dangerous pace have been found successful in Wareham, Mass. The automobile club of that place has had the flaring banners up for about a month on the road approaches to the business portion of the town and motorists in general have respected the requests for slow speed. The few exceptions have had their numbers taken and are being written to by the club, asking a more courteous observance of the club's signs. Wareham is one of several towns in Massachusetts where this plan is on trial. It was one of the towns noted for its "traps," the operation of which has been suspended pending the success of the banner experiment.

BUMPERS FOR GRADE CROSSINGS

Long Island Railroad President Evolves Scheme to Halt Reckless Chauffeurs—Its Adoption a Probability.

President Ralph C. Peters, of the Long Island Railroad Company, who of late has been paying as much attention to automobiles as he has to the net work of rails and tracks which cobweb Long Island, has hit upon a happy scheme to eliminate or reduce grade crossing accidents. At least, Mr. Peters considers the scheme a good one, and this opinion is held also by Alfred J. Eno, president of the Long Island League; A. R. Pardington, general manager of the Long Island Motor Parkway, and John L. Webb, chairman of the committee of safety of the Long Island Automobile Club.

These gentlemen met in Mr. Peters' office in Long Island City on Monday afternoon and after mature deliberation evolved a plan for establishing a series of bumps that will outbump the Glencoe, Elgin, Aurora, and other excrescences designed to put the "kibosh" on speeding tendencies of reckless chauffeurs.

In short, it is planned to construct a hummock about a foot high in the road on each side of the grade crossing and 150 feet from them. It is figured that drivers will then be compelled to slow down or run the risk of breaking the springs of their cars. Mr. Eno said that this plan had worked in Babylon where all other methods to stop the reckless speeding of motor cars had failed.

President Peters contended that flagmen at grade crossings are practically useless and that it would be impossible to place a watchman at every crossing, as there are 429 of them on Long Island. He said that his company would be willing to bear half the expense of constructing the bumps and Mr. Eno said that he would take it up with his league and propose that it bear the other half.

One of the attendants at the meeting proposed that the railroad company make depressions in the road instead of bumps, but when it was pointed out to him that the hollows in the road could not be seen by approaching drivers, while the bumps would appear formidable from a distance, he was won over to the original plan.

Automobile Road to Succeed Tow Path.

The old tow path of the long abandoned Pennsylvania canal along the picturesque lower Susquehanna is to be converted into an automobile road. The Wrightsville and Chanceford Turnpike Co. is planning to make the tow path part of a motor road system between Wrightsville and Long Level, Pa., opening up a wealth of beautiful scenery to the tourist.

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CONEY ISLAND COPS CAPTURE CARS

Unattended Vehicles "Arrested" and Locked Up—Wobbly Wheels Cause One to Register as a 'Plain Drunk."

It was an eventful night when seven touring cars, which were standing untenanted and untethered to posts along Surf avenue, Coney Island, were confiscated by Capt. Kelly, of the Coney Island police force, from which one would be led to imagine that the captain is fond of fine automobiles. The charge against these seven arrested cars, however, was that they were without care takers and obstructing traffic. The machines were also charged with vagrancy. One had wheels that wobbled and it was entered on the blotter as a "plain drunk," it is said. Pursuant to this, all seven cars were sent from the station house at 2 a. m. to be locked up in a garage on West Seventieth street, and the captain's command was that they should not be removed until he gave orders for their release. All remained there over night except two. One was bailed out by its owner and the other broke jail and escaped, which greatly displeased the captain's subordinates when it caused the captain to become exceedingly riled.

Not until after much long delay and payment of storage charges, could the drivers obtain their cars and at that, the owners had to promise solemnly that they would never again permit their cars to be on the streets alone after dark and obstruct traffic along the busy and brilliant main thoroughfare of the gay summer city by the sea.

The crusade, it is said, follows a complaint in court recently when a taxicab chauffeur and a cabby fought after being arrested for obstructing the highways. The taxicab people complained that if they were kept on the move every one should be treater alike and thereupon the crusade against private cars began. It seems that the captain started out about 1 a. m. with a squad of reserves in plain clothes. He hailed two men who could run automobiles and after enlisting them as volunteers, detailed them with the reserve squad. The reserves were given orders to pick up every car that was without an attendant along Surf avenue. The policemen went forth and the first "capture" was in front of Henderson's. There was a large 90 horsepower gray Thomas touring car which seated eight persons on the street close to the curb. No one was watching it and one of the "volunteers" took his place at the steering wheel and piloted the car to the police station.

The chauffeur was again sent out, and found another car near the corner of Henderson's walk and Surf avenue in charge of a sleuth. It had been captured without a struggle, while the owner was apparently looking upon the wine when it was pink. It was sent to the station, too. By this time word began to get around that the police were picking up the cars, and the chauffeurs sat on their machines and gave the policemen the laugh. At least the majority of them did. Seven altogether were amiss, and their machines were taken to the station.

About 3 G. M., John Comparr, who gave his address as the New York Yacht Club, appeared and reported that his car had been stolen. He was asked where he had left the machine and gave a description of it. Capt. Kelly in person took the complaint and recognized the machine which fell into his care first, a big gray touring car. Mr. Comparr was given a severe lecture about the evils of leaving a machine to block the highway and an order on the manager of the garage for his machine. He paid the storage charges, got his machine and left the Island.

Then Capt. Kelly waited for other complaints, but none came. The owners, it was said, had received a "tip" that the police had their cars and they refused to make a break to get them until they could learn the nature of the charge against them. Some of the machines could not be removed by their owners for a couple of days, as the morning after the raid, the captain went off on a little vacation. Beware the Coney cop, my son!

Losing a Passenger En Route.

If Genevieve's mother had particularly impressed upon you the fact that you must drive very carefully, because it would break her heart if anything should happen to her only daughter, and you had solemnly promised to pay strict attention to driving and use both hands on the steering wheel, and to prove it had put Genevieve in the rumble seat while you took the seat in front —(take a breath here)—and bearing mamma's injunction in mind all the while you had carefully watched the road ahead for seven miles, not turning around once for a chat-a-chat, until you drew up to the ice cream parlor and jumped out intending to help Genevieve alight when—say, wouldn't it make you feel like a limp dish rag if no Genevieve was there?

Well, that is the way F. L. Dayton felt when he slowed up at Mount Carmel, Conn., late Saturday night and found that his young woman companion had been bounced from the rumble seat some place between there and seven miles back. Dayton drove back slowly and searched for miles, but no trace of his erstwhile rumble seat companion could be found, and inquiry at the hospitals did not give him any information. In fear and trepidation he made his way to Miss Genevieve's—or whatever her name was—home, and what was his surprise to find her safe and smiling. Although it has not officially been confirmed it is thought that Dayton will remove the rumble seat from his car, at least when he takes Miss What's-her-name out again.

AUTOMOBILES BANISH MOSQUITOES

Long Island Paradise Where the Buzz and the Bite are Unknown—A Summer Colony of Motorists.

One of London's brilliant scientists declared a few days ago that fumes and smoke coming from the exhausts of motor cars killed germs and bacteria and bacilli and the like. Whereupon other scientists made a guy of him. Nevertheless, smoky exhausts will do something just as important, according to the cottagers of Southampton, Long Island, for they have discovered that gases pouring from the cylinders kill mosquitoes. Long Island has long vied with New Jersey as a mosquito reservation and the newly discovered means of getting rid of these annoying birds is a boon to Southampton's residents. According to reports, everyone who drives a motor car is assisting in the extermination by burning quantities of cylinder oil and shooting the smoke all along the line. It is not pleasant for the natives, but they are putting up with the treament, since the mosquito crop is noticeably diminishing.

Old Agawam Lake, on which is the residence of Elihu Root, occupied this season by Nathaniel Holmes; the residence of Col. Robert M. Thompson, J. P. Robb, and that of Stephen Peabody, is being freed from the pests. Along Job's Lane, at the foot of the lake, run daily the eight cars of Hugh J. Grant, ex-Mayor of New York; the four of August Belmont, Jr., three each of James Parrish and Stephen Peabody, and the two of Dr. Maitland Alexander. Before the season is over, these residents of the cottage colony expect to get in some good work, and the dealers in summer board will be able to truthfully advertise: "Delightful country—no mosquitoes!"

Working for Speed Law Observance.

The Automobile Club of Bridgeport, Conn., has been doing good work lately in endeavoring to have automobiles observe a reasonable rate of speed. Circular letters have been sent to the members by the Public Safety Committee, giving the sections of the law most often violated and asking members to join in supporting the law, for which the club was partly responsible in having it passed, and which is one of the most liberal in the country.

The Public Safety Committee has been following up this action with personal letters to owners of cars where flagrant violations of the law have come to its notice. On a recent Sunday the committee placed flagmen on Connecticut avenue, a wide and much traveled thoroughfare, forming the eastern approach to the city. Automobilists were halted and handed a card which asked that a reasonable speed be preserved on this street and through the city.

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The Week's Patents.

889,960. Running Gear for Vehicles. Isaac E. Palmer, Middletown, Conn. Filed Nov. 20, 1907. Serial No. 402,954.

1. In running gear for vehicles in which the members of a pair of wheels to the rear of a pair of steering wheels are arranged out of transverse alignment, means for swinging a rear wheel out of its normal plane to compensate for lateral drag in turning a curve.

889,996. Automobile. George A. Weidely, Indianapolis, Ind., assignor of one-half to Harold Smith, Indianapolis, Ind. Filed June 1, 1907. Serial No. 376,824.

1. In a motor vehicle, the combination, with the driving shaft, of a carrying wheel mounted upon said shaft and having a rotative engagement therewith, of a bearing engaging both the shaft and wheel, and a second bearing for said shaft.

890,571. Gas Engine. Ransom E. Olds and Horace T. Thomas, Lansing, Mich., assignors to Reo Motor Car Company, Lansing, Mich., a Corporation of Michigan. Filed July 10, 1907. Serial No. 382,976.

1. In a six-cycle gas engine, an exhaust apparatus adapted to relieve the pressure toward the end of the working stroke, a second exhaust apparatus adapted to convey the products of combustion remaining after the gases under pressure have been exhausted, and means for holding said second exhaust apparatus open for the intake and discharge of a scavenger charge, for the purpose described.

890,589. Transmission Gear. Elijah W. Potts, Detroit, Mich., assignor, by direct and mesne assignments, of two-sixteenths to Albert W. Wadsworth, one-sixteenth to Samuel P. Bradley, one-sixteenth to Louis Cohn, and one-sixteenth to Theodore L. Wiggins, Detroit, Mich. Filed Jan. 2, 1906. Serial No. 294,124.

1. In a transmission mechanism, the combination with the driving shaft, of a driving gear wheel supported by but rotatable independently of said shaft, gearing for driving said gear wheel indirectly at variable speeds, comprising gear wheels rotatable in unison loosely mounted on the driving shaft, means for locking said gear wheels to the driving shaft, and means for connecting the driving gear wheel directly to the driving shaft to afford a direct drive and for disconnecting all of the gears of the mechanism from the driving shaft.

890,615. Automobile. Albert G. Davis, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 8, 1904. Serial No. 192,479.

1. In a self-propelled vehicle, in combination with the frame thereof, a prime mover, an electric generator having its moving member mounted on the shaft of the prime mover, an electric motor having its shaft in line with the shaft of the prime mover, and an auxiliary frame supporting said prime mover, said generator and said motor, and suspended from the said vehicle frame.

890,654. Motor Vehicle. Russell Huff, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Oct. 21, 1907. Serial No. 398,451.

1. In a motor vehicle, the combination with the frame, of a baggage rack pivotally attached to the rear part thereof, and steps attached to the spring hangers for supporting said rack.

890,666. Brake Mechanism for Self-Propelled Vehicles. Hermann Lemp and Henry S. Baldwin, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Aug. 7, 1905. Serial No. 272,990.

1. In a motor car, the combination with a floating axle, of a tubular axle thereon having pins at one end, and a driving wheel on said floating axle having a brake flange engaging with said pins.

890,667. Weather Screen for Motor Vehicles. Joseph Lingley, Peckham, England. Filed May 6, 1907. Serial No. 372,225.

1. In a wind screen for vehicles, a fixed lower part carried by standards and an upper movable part centrally mounted upon centers permanently fixed at the upper ends of solid arms the lower ends of which are mounted upon centers permanently fixed upon the lower fixed part and means for fixing the arms at any desired angle with the lower fixed part and means for fixing the upper movable part at any desired angle with the arms substantially as herein shown and described and for the purpose stated.

890,671. Pneumatic Wheel for Vehicles. Bryce J. Macaulay, Eastbourne, and James A. F. Hall, Hampden Park, near Eastbourne, England. Filed Aug. 12, 1907. Serial No. 388,220.

The combination with that class of pneumatic wheel wherein a supplementary trough shaped tire has its flanges outside the sides of the rim of the felly and wherein the air tube is situated between the rim or felly and the bottom of the said trough shaped tire, of an outer thickened tread, slanting pockets or recesses on or in the outside of the flanges of the supplementary tire, arms attached so as to revolve with the wheel and having correspondingly slanted outer ends which enter easily the said pockets or recesses, resilient cushions at the bottom of the pocket or recesses, and emergency blocks by which the wheel and tire can be held rigidly to the wheel, substantially as hereinbefore described.

890,725. Valve Remover. Berndt A. Swenson, Providence, R. I. Filed Feb. 24, 1908. Serial No. 417,260.

1. In a valve remover, the combination with the body, of supporting means upon the upper portion of the body, a forked member slidably mounted in the lower portion of the body, and cam means upon the body operatively connected with the forked member for actuating said member.

890,742. Liquid Gage. George E. Whitney, East Boston, Mass., assignor, by mesne assignments, to Stanley Motor Carriage Company, a Corporation of Massachusetts. Filed July 26, 1902. Serial No. 117,107.

1. In a liquid gauge, a liquid chamber, a transparent wall therefor and a reflecting surface within said chamber presenting a portion inclined at an angle with said wall in a vertical direction.

890,875. Awning and Dust Screen for Vehicles. Henri S. Samuel, Paisley, Scotland. Filed April 18, 1907. Serial No. 368,925.

1. The combination of a vehicle, a rear frame pivotally connected thereto, means for holding the frame in an upright or in an inclined position, additional frames re-

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movably held upright in the vehicle, a rotatable roller extending across the rear of the vehicle, means for supporting the roller, a sheet wound on said roller and extensible therefrom, and securing means carried by the sheet whereby it may be secured over the vehicle to form an awning or to the rear frame to form a dust guard.

890,963. Running Board for Automobiles. Howard E. Coffin, Detroit, Mich. Filed July 18, 1907. Serial No. 384,304.

1. The combination with a running board, a side sill of a vehicle frame and a shield; of a hanger for said running board consisting of a struck up sheet metal arm of U-shape section, said arm curving from a vertical to a horizontal plane, flanges on said vertical portion for engaging said side sill and out-turned flanges upon said horizontal portion for engaging said mud shield.

890,970. Carburetting Apparatus for Explosive Engines. Fritz Durr, Karlsruhe, Germany. Filed March 2, 1907. Serial No. 360,174.

In a carburetter for explosive engines, the combination of a reservoir having therein a centrally arranged tube the lower end of which is above the bottom of the reservoir, and said tube being provided with apertures adjacent its upper end, a cap closing the upper end of the tuoe and forming an annular chamber about the apertured section thereof, an inwardly opening valve closing an air inlet in a wall of the cap, a hydrocarbon nozzle extending into the central tube, and an annular valve surrounding the tube within the cap and adapted to regulate the passage of air through the apertures in the tube, substantially as described.

890,981. Suspension Frame for Automobiles. Reinhold Herman, Crafton, Pa. Filed April 25, 1906. Serial No. 313,525.

1. An automobile comprising a front and rear axle, a bolster upon each of the axles, a pair of superposed frame members, the upper of which is fixedly connected to the front bolster and movably connected to the rear bolster and the lower of which is movably connected to the front bolster and fixedly connected to the rear axle and a motor supported from said lower frame member at the front thereof.

891,017. Coil Box Switch for Ignition Systems. Richard Varley, Englewood, N. J., assignor to Varley Duplex Magnet Company, a Corporation of New Jersey. Filed March 25, 1907. Serial No. 364,496.

1. In a coil box switch, a coil box having a recess in its front face, blocks in said recess, spring blades projecting downward in parallel directions from said blocks, a rotatable block having segments movable to engage certain of said blades, and having a depending lever, and a plug adapted to be inserted between the remaining of said blades to complete a circuit connection there between.

891,030. Armor for Rubber Tires. Vendel L. Bekefi, Cleveland, Ohio. Filed Dec. 9, 1907. Serial No. 405,678.

An armor for rubber tires consisting of a series of overlapping plates substantially U shape in cross ection, and each plate having a transverse depression at one end and outward projections at the ends of said depressions and open slots in the other end lengthwise of the plate engaged by the said projections on the adiacent plate, in combination with a wheel and tire and means to secure the armor on the tire.

891,051. Automobile Construction. Godfrey Engel, Pittsburg, Pa. Filed Sept. 6, 1906. Serial No. 333,456.

1. In a motor vehicle, the combination of a twin engine having multiple cylinders arranged in two rows, each row being connected to a separate crank shaft, the said crank shafts being geared one with the other, and means independent of the gearing between the crank shafts for transmitting power from said crank shafts to the driving agency of the vehicle.

891,169. Spring Tire. Bernhard Hilger, Elgin, Ill., assignor to Frank J. C. Krahn and Morritz Bautsch, Elgin, Ill. Filed June 19, 1907. Serial No. 379,787.

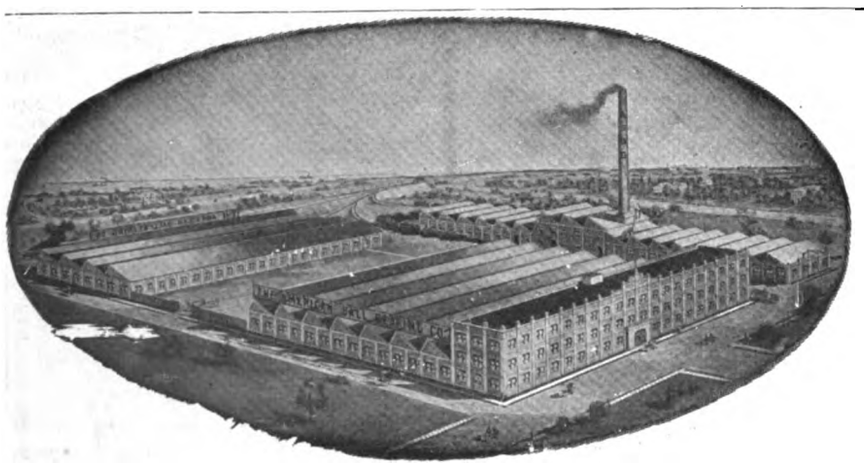
In a wheel, a felly, an outer rim, springs interposed between said felly and rim, a plurality of clips carried by the rim and formed with a portion extending transversely of said rim and with down-turned end portions, cover plates secured to said down turned end-portions of the clips, a packing, comprising a strip of soft material, interposed between said cover plates and said rim, and a packing, comprising a strip of soft material, interposed between said springs and said felly and covering the entire periphery of said felly and extending beyond the sides thereof and against said cover plates.

891,172. Wheel Rim. Ernest Hopkinson, East Orange, N. J., and Thomas Midgley, Hartford, Conn.; said Hopkinson assignor to The Hartford Rubber Works Company, Hartford, Conn., a Corporation of Connecticut. Filed July 5, 1906. Serial No. 324,762.

1. In a wheel rim, the combination with a main rim member, of a removable side flange, means for contracting and expanding said side flange, said means comprising a member threaded adjacent to each end, the threads at one end being opposite in direction to those at the other end and adapted to engage threaded sockets in the ends of the side flange, a worm pinion fixed on said member, and a worm in mesh with said worm pinion.

891,219. Carburetter. Albert W. Menns, Malden, Mass. Filed March 6, 1907. Serial No. 360,847.

1. In a carburetter, the combination of a main outlet therefrom for the vaporized mixture, a plurality of float chambers adapted to contain hydrocarbon liquid, a hydrocarbon passage from each of said float chambers, a plurality of mixing compartments each of which communicate through one of said hydrocarbon passages with a float chamber, an air inlet to each of said mixing compartments, an outlet for the vaporized mixture from each of said mixing compartments, and a valve interposed between the said main outlet and the individual outlets or passages from the said mixing compartments, said valve being adapted to cut off one or more of said compartments from the said main outlet.



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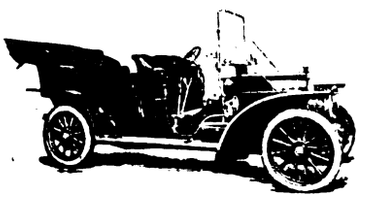
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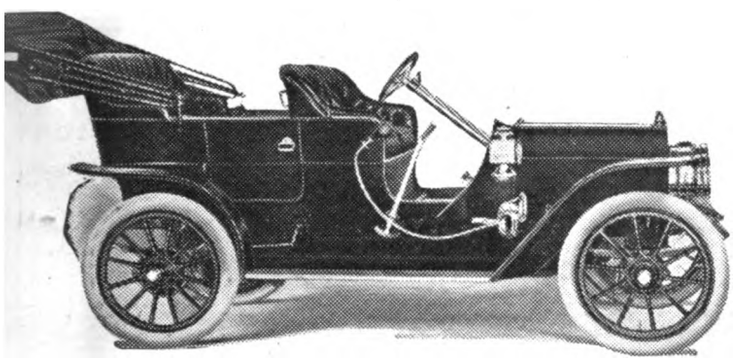
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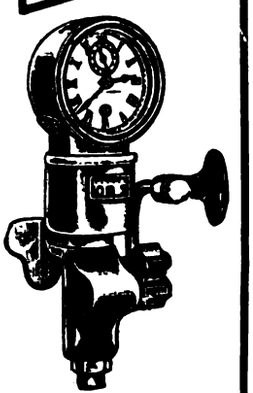
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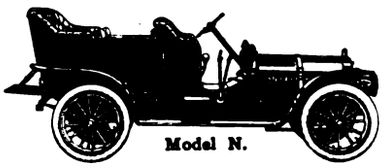
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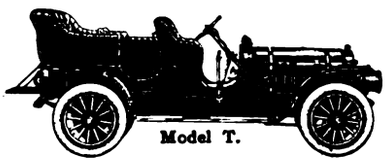
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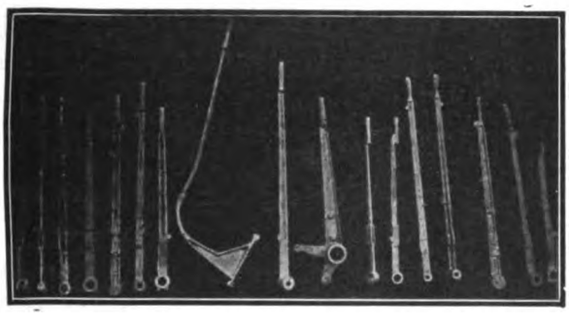
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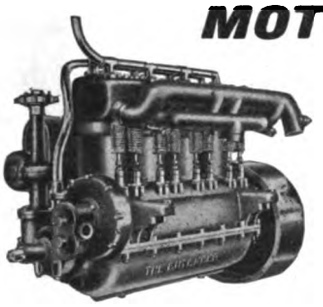
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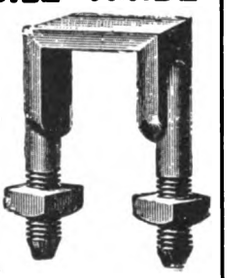
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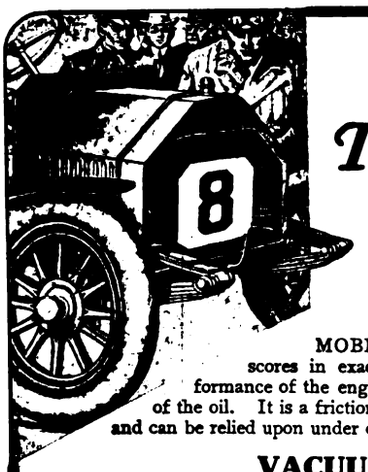


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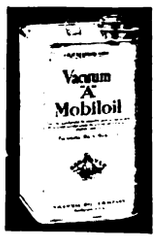
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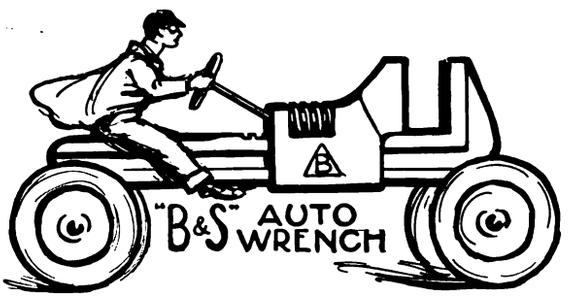
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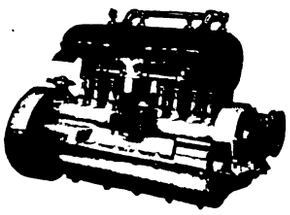
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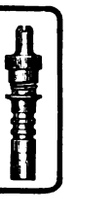
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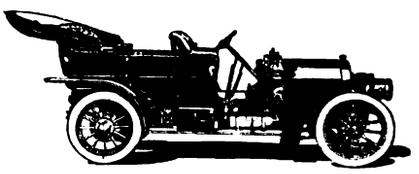
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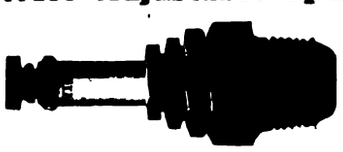
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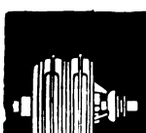


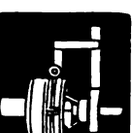
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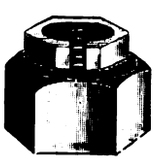
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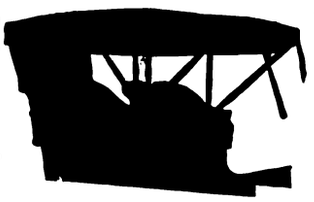
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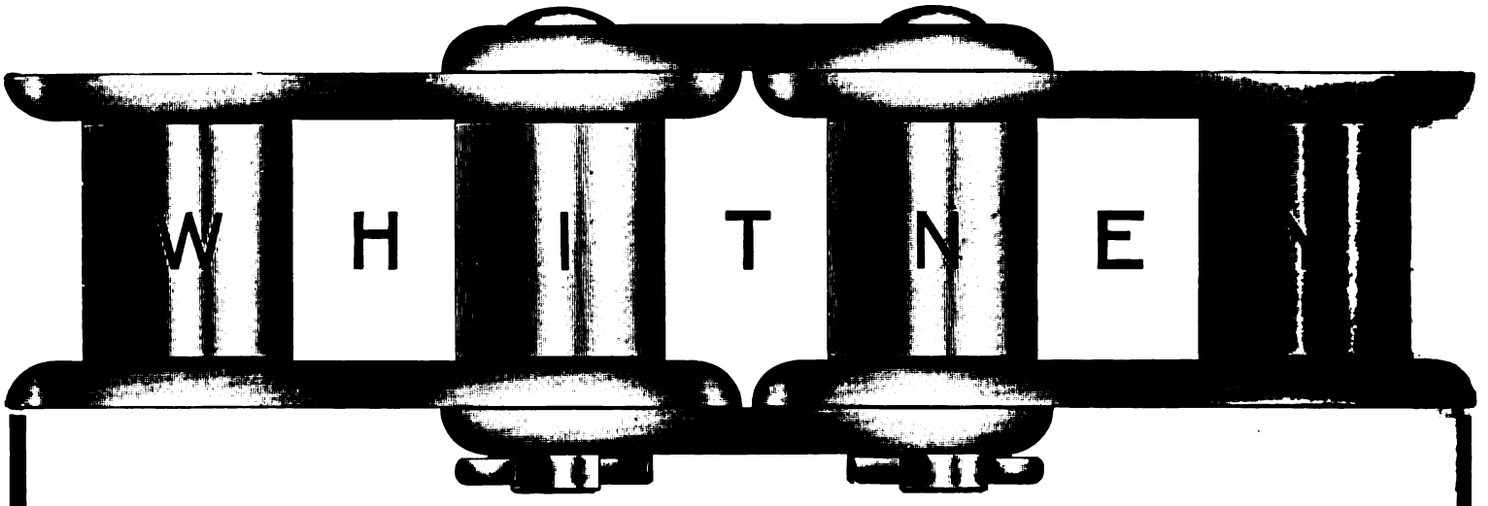
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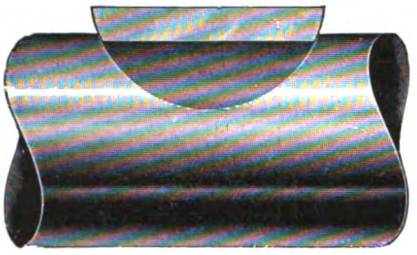


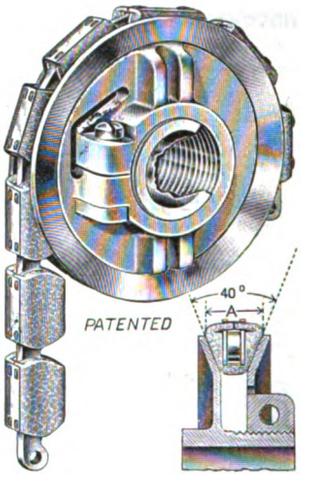
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FOR
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If you are not taking advantage of the Woodruff Patent System of Keying it will pay you to investigate.

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Ten cents a copy—
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"Solar Lamps Invaluable"

Says Schuster, Driver of Thomas Car, New York-Paris Race.



August 18, 1908.

BADGER BRASS MFG. CO.

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HARTFORD TIRES

TRADE MARK

"The tires with the doubt and the risk left out"



will satisfy the owner completely. He knows them as best by reputation and will learn that their quality justifies their high repute.

Better material, design and workmanship than characterizes Hartford Tires are not possible.

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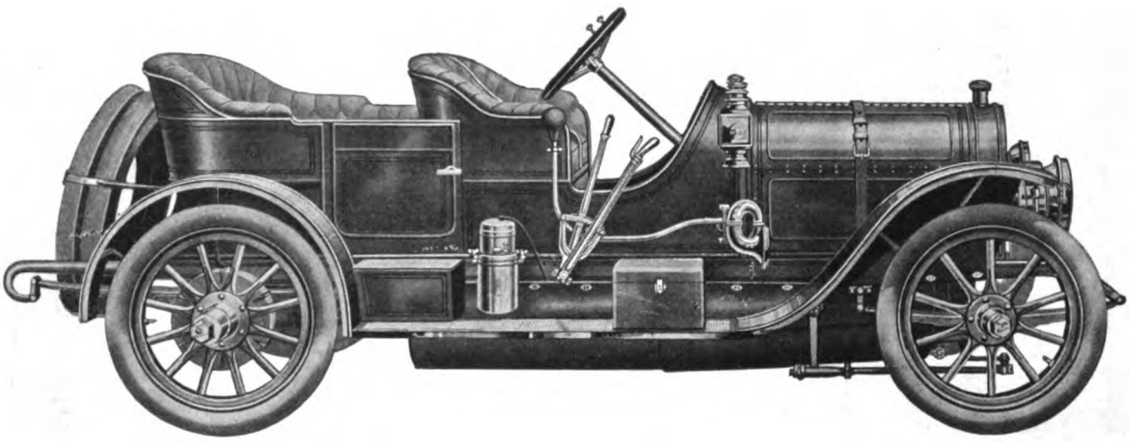
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1909
Pope-Hartford Models



Pope-Hartford Model S, Pony Tonneau, $2750

The POPE-HARTFORD 1909 models embody all that is best in automobile construction and will be conspicuous in the foremost ranks of the automobile world.

We invite comparison of the details of POPE-HARTFORD cars for 1909 with those of the world's best motor cars. Because of their perfection, refinement and elegance they will appeal to the superior judgment of critical and discriminating purchasers.

OUR 1909 LINE CONSISTS OF THREE MODELS:

A Standard Touring Car . . . . Price $2750

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A Pony Tonneau Car similar to the above illustration, **Price $2750**

New and important improvements, not incorporated in any other motor car, are included in the POPE-HARTFORD 1909 CARS. Each improvement which we have added has been given a careful and thorough *test*, and our catalog, now in preparation, explains fully all the details and mechanical excellence of the new models. Let us place your name on our mailing list for an advance copy.

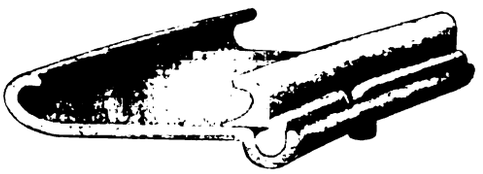
Agents almost everywhere. Correspondence invited with interested dealers.

Pope Manufacturing Company

HARTFORD, CONNECTICUT, U. S. A.

Members A. L. A. M.

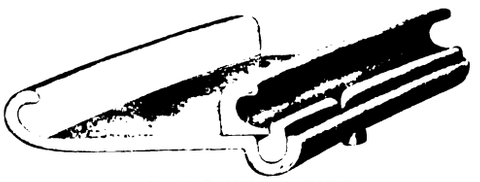
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FOR CLINCHER TIRE.

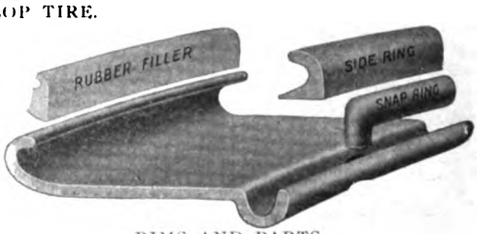
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Removed and applied by simply unsnapping or snapping the locking ring. No Turnbuckle to bother with. Accommodates any standard size tire. Clincher, Dunlop or Quick Detachable.



FOR DUNLOP TIRE.

As an evidence of the favorable impression this rim has made upon car manufacturers, it may be stated that it has been adopted by the American League of Automobile Manufacturers as standard equipment for American cars; the change to take place as soon as it can be conveniently arranged.

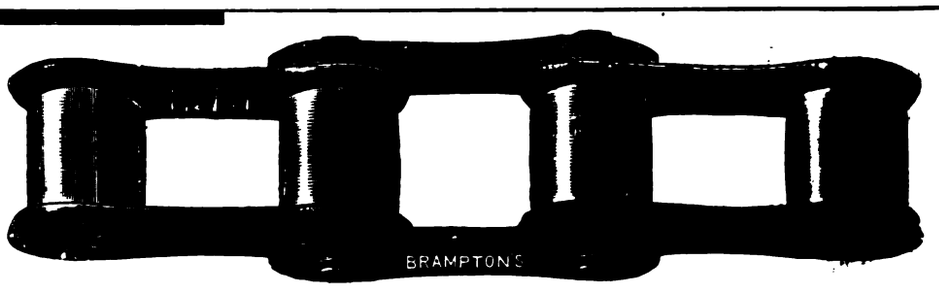


RIMS AND PARTS.

Morgan & Wright Tires and Standard Rims would furnish a matchless equipment for your car, from the standpoint of both economy and modern rim design.

MORGAN & WRIGHT, Detroit

THE BRAMPTON MOTOR CHAIN



All side plates on both sides of the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement. **THE BRAMPTON CHAIN** is made of self-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material —self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL**, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size. We have in stock chains to fit all American and foreign cars.

YOUR 1909 CAR

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.
Agents wanted in unoccupied territory. Catalog on request.

CHAS. E. MILLER, Manufacturer, Jobber, Exporter and Importer
Main Office: 97-99-101 Reade Street, New York

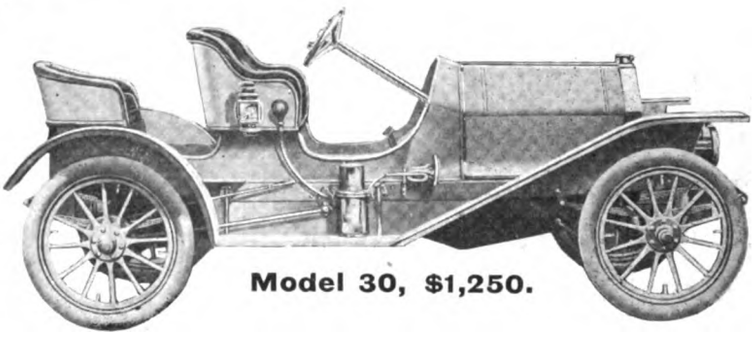
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1909

Overland

"ONLY PEDALS TO PUSH"



Model 30, $1,250.

The Overland model 30 embodies all the sterling features of the 1908 model 24, but is larger, more powerful, more roomy and more fully equipped car.

There are 400 satisfied owners of model 24s, booting the Overland cars throughout the country.

Every dealer who handled the Overland during last season has applied for the agency this year—none of them lost money.

We still have a little unoccupied territory
We have a liberal contract
We are in shape to make early deliveries

Write for our specifications and particulars of our four and six cylinder Touring cars.

OVERLAND AUTOMOBILE COMPANY

INDIANAPOLIS, INDIANA

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TIME WAS when tire worry spoiled much of the enjoyment of motoring and the motorist who footed the bills had no voice in the matter.

THEN CAME THE AJAX wrapped tread tire with its superior services.

AND NEXT THE AJAX 5,000 MILE GUARANTEE —If the user of Ajax tires fails to obtain 5,000 miles service from his tire, it is for us to worry—not him, and we make good.

WITH AJAX TIRES the tire problem resolves itself into a plain proposition. We know that they will do, and we offer you the best kind of an insurance for expressing your willingness to find out for yourself.

IS THERE ANYTHING MORE BUSINESS-LIKE THAN THIS?

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York
Factories: Trenton, N. J.

BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodwood Ave. — Los Angeles, 1040 S. Main St.
Agents in all large cities.

Yon Can Afford the $2000 Mitchell

—Afford to **buy** it because it is moderate in price.

We know you can afford to **keep** it, because we have many letters from users of Mitchell, testifying from actual daily experience, that it is the most economical car to **operate.** Before **you** buy a car, send for these letters and try a Mitchell in a 50 or 100-mile road test.

In demonstration, you'll notice not only that its style, finish and construction is equal to that of the extravagantly high priced cars, but that its **performance is too.**

Proof is easy, Mr. Business Man.

The Mitchell Agent will be glad to take you out at any time you say. Just call him up—no obligation on your part.

Try the $2,000 Touring Car—the $2,800 Limousine—the $1,250 Roadster or the $1,000 Runabout.

Get demonstrations of high priced cars and compare the Mitchell with them.

Call up the Mitchell Agent to-day and just say

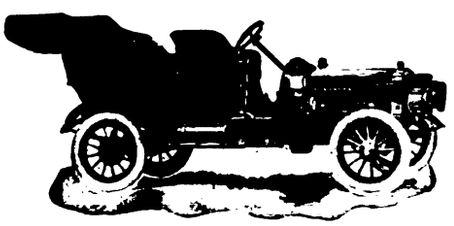
"Show Me."

The Mitchell Touring Car shown below is 35 H. P.—4-cylinder—speed, 50 miles—finish, Mitchell blue—price, $2,000.

Write for Catalogue No. 18, describing the other Mitchell models.

Mitchell Motor Car Co., 286 Mitchell street, Racine, Wis.

Standard Manufacturers,
A. M. C. M. A.



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Mongrel or Thoroughbred?

NOW IS THE TIME for you, Mr. Thoughtful Dealer, to decide what you will sell in 1909.

WILL IT BE A MONGREL? a car assembled from parts carried together from all over the country and hammered into shape as well as may be?

OR WILL YOU SELL THE THOROUGHBRED—a homogeneous mechanical masterpiece, every single part of which is the result of the same genius that devised the whole?

"ASTOUNDING," "MARVELOUS," "WONDERFUL," are the terms with which some assembled cars are now tagged, though they are astounding, marvelous and wonderful only to the assemblers, who like Rip Van Winkle, have been dozing in the growing woods of automobiledom and who now, bewildered by the progress that has been going on, seize upon time-tried and long-established practices and herald their adoption by the assemblers as brand-new discoveries.

LET'S REASON IT OUT: On the one hand you have the assembled car, with an engine bought from one manufacturer, a frame from another, and a transmission from a third, and so on down to the last rivet. The maker of the engine, the mill in which the frames are pressed, the transmission man, all derive their separate profits, leaving no other way to the assemblers to obtain their rewards than by skimping the quality of their "product."

AND THEY DO IT—THEY MUST! When you examine some of these astounding cars you will be truly astounded on finding that the four-cylinder engine is cast in one piece and has only two main bearings, whereas the Maxwell has four cylinders and five main bearings. You know well enough that making a motor with only two bearings is equal to leaving the engine to its own devices as far as alignment is concerned.

IT WILL BE A TOUGH JOB FOR THE DEALER to convince the purchaser who is wise that some four-cylinder engines of small dimensions will develop as high as 30 horsepower—because they can't.

MAXWELLS ARE A HOME-GROWN AMERICAN PRODUCT. The use of Maxwell features in Maxwell cars was neither a heaven-given inspiration nor the aping of foreign design, but the outcome of sound engineering sense.

WHEN 10,116 MAXWELL OWNERS testify to the excellence of their cars, all of which have been sold by Maxwell dealers, then the Maxwell proposition is one that you can't afford to pass by.

BEFORE HITCHING YOUR WAGON TO A STAR it will be wise for you to find out all about a dealership for Maxwells, the success of which is past and present, instead of lying in the dark and distant future that has swallowed so many wonderful cars that have been marvelous chiefly in their complete and rapid disappearance from the field of legitimate competition.

Benj. Briscoe

President.

MAXWELL-BRISCOE MOTOR CO.

Standard Manufacturers A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

Address communications to Tarrytown, N. Y.

Perfection in part will produce perfection in the whole



"Firestone" TIRES

"The Tires of Sterling Quality"

are constructed on this principle.

Ever keeping in mind the sole aim—the raising of the standard of pneumatic tires—we employ the most expert tire builders in the various courses of construction.

Each expert forwards his product on the basis of the best that he can do—he has already made his record—he cannot go back of that—he must do as much better as he can.

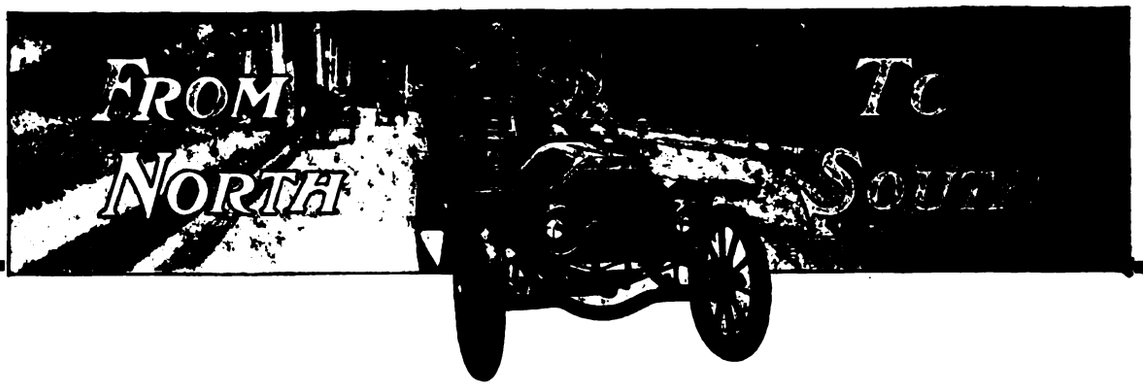
All the perfected parts are assembled with method and deliberation—making the per-tedfectwhole—the best tire made.

Branches and Agencies Almost Everywhere.

FIRESTONE TIRE & RUBBER CO.

Akron, Ohio

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on a midwinter trip from New York to New Orleans, Mr. Ralph Owen driving an **Oldsmobile,** found in plenty, incidents and conditions of the sort that showed the kind of stuff men and things are made of.

When you stop to consider what an automobile is built and intended for, the endurance of this car is marvelous. He says:

"Between Blue Stores and Hudson the road was particularly rough and rutty, and as we were nearing Hudson one of our rear tires was wrenched off in a frozen rut which was nearly eight inches deep. At Buffalo, a thorough examination of the car was made to see if the terrible strain under which it had been the last three days had in any way decreased its efficiency, but aside from a broken spark plug, which had given us some annoyance the last ten miles into Buffalo, nothing was discovered."

This Car was equipped with TIMKEN ROLLER BEARINGS AND AXLES

Has it ever occurred to you WHY the manufacturers invariably equip the cars they pick for such trips, with **Timken Product?** There is a reason. May we give it to you?

THE TIMKEN ROLLER BEARING AXLE COMPANY, Canton, Ohio

Branches: 10 E. 31st Street, New York. 429 Wabash Avenue, Chicago.

BOSCH



"No Ignition Trouble Whatever"

says Geo. Schuster, Driver of the winning Thomas Flyer, in the New York to Paris Race.

New York, Aug. 20th, 1908.

BOSCH MAGNETO CO., New York City.

Gentlemen: The performance of the Bosch Magneto was just as remarkable as the performance of our Thomas car. At times when it was necessary to ford streams, and water was thrown over the top of the bonnet of our car, I was sure we'd have magneto difficulties. On the contrary, we had no trouble during the entire trip. Perfect Ignition all the way from New York to Paris. The Bosch Magneto is perfect.

Yours truly GEO. SCHUSTER.

BOSCH MAGNETO COMPANY, 160 W. 56th Street, New York

Chicago Branch, 1253 Michigan Avenue.

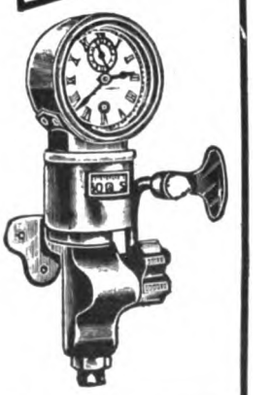
Warner Auto-Meter

GUARANTEED FOR ONE YEAR.

"Thirty Days' Free Trial"

When a manufacturer is willing to send his product to anyone, anywhere, for 30 days—with no deposit, no agreement to buy, no promise to do anything except give that product a fair trial—he must have more than ordinary confidence in his article. In order for him to have that confidence he must have a most extraordinary product.

That's what we do. We'll send an Auto-Meter to any automobile owner in the country—with no deposit, no agreement, no promise to do anything but put it on his car and give it a fair trial. It doesn't matter whether he has another make of speed indicator already on the car or not. Indeed, for the sake of comparison, we hope he has. We will abide by the decision—for he will always keep the indicator that tells the truth. We claim for the Auto-Meter that it is the only one of which "the dial never lies." We believe that the instrument itself is the most eloquent salesman we have—we're willing to let it do our talking. Send to-day—just tell us what make and model of car you have—size of tires, etc.,—and we will send you an Auto-Meter.



Is Right

Stays Right

Accurate At All Speeds

Warner Instrument Co.,

Factory and Main Office,

255 Wheeler Ave., Beloit, Wis.

Address your request for Free Trial to Our Nearest Branch House.

New York, 1902 Broadway; Boston, 925 Boylston St.; Philidelphia, corner Broad and Race; Pittsburg, 3432 Forbes St.; Cleveland, 2062 Euclid Ave.; Buffalo, 732 Main St.; Detroit, 239 Jefferson Ave.; Chicago, 1305 Michigan Ave.; Indianapolis, 330-½ N. Illinois St.; St. Louis, 3823 Olive St.; San Francisco, 550 Golden Gate Ave.; Los Angeles, 1040 S. Main St.

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Standard Detachable Rim

Resolution passed by the NATIONAL ASSOCIATION AUTOMOBILE MANUFACTURERS at a meeting held in New York, August 5th, 1908.

"Whereas, the Standard Universal Rim, described in the report of "the Special Rim Committee, has been recommended by the committee "as mechanically satisfactory, be it

"RESOLVED that this association hereby adopts the rim so de- "scribed as standard, subject to the consummation by the Special Rim "Committee of satisfactory commercial arrangements with the patentee "and manufacturers."

At the above meeting all the detachable rims now on the market as well as proposed new rims were carefully considered.

THIS IS THE RIM



Standard Rim as Used for Clincher Tires



Standard Rim as Used for Dunlop Tires

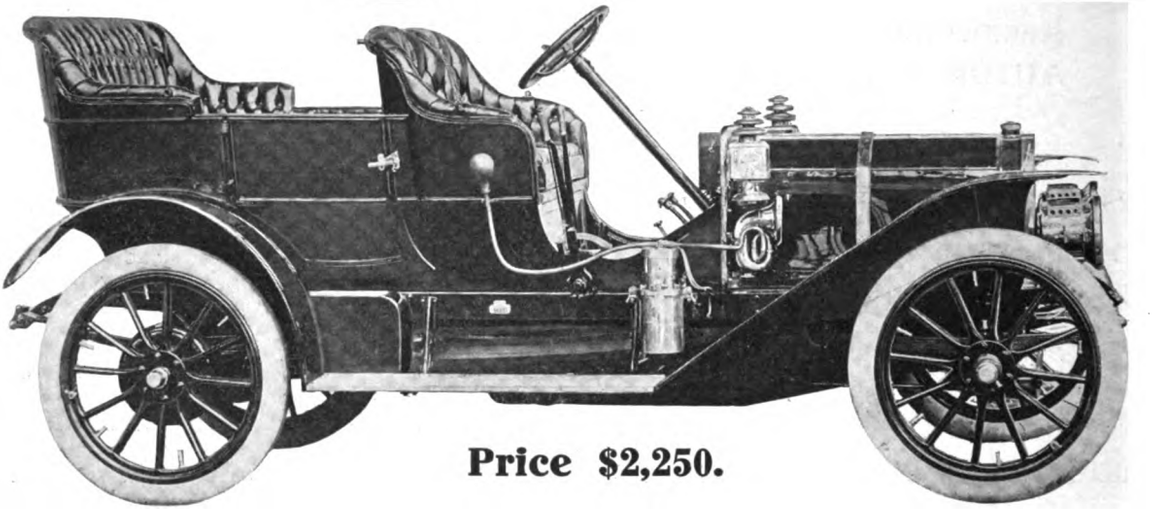
Hartford Rubber Works Co.
Hartford, Conn.

Morgan & Wright
Detroit, Mich.

G & J Tire Co.
Indianapolis, Ind.

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Rambler



Price $2,250.

THE ADVANTAGES OF THE OFFSET CRANK SHAFT

Here is a simple explanation of the offset crank shaft, the great power developing feature of the Rambler.

Notice a man about to mount a bicycle. He always adjusts the pedal in that position where it will receive to best advantage his full weight on the first downward stroke. The best position for the pedal is just slightly forward of the center of the crank shaft on the bicycle. If he mounted when the pedal was directly over the center of the crank shaft, his weight would fall directly on the bearings and the first downward stroke would be retarded and, therefore, weak.

Now imagine the man's leg as the piston of an automobile engine; the pedal of the bicycle as the crank pin and the crank shaft of the bicycle as the crank shaft of the engine. In the ordinary engine the crank pin and piston (the pedal and the man's leg) are directly over the dead center and until the crank passes the turning point all effort is wasted. Thus, when the explosion occurs, the greatest force falls upon the bearings.

In the Rambler engine at the instant the explosion occurs above the piston the crank pin has moved past the dead center; the crank shaft is in a position to receive the full pressure and turns without friction. Consequently there is no side thrust of the piston and wear on the cylinder walls is thus saved.

Try this Rambler on the hills and notice how steadily and powerfully it pulls when running under load.

Tell our nearest representative to call at your home and take you to your place of business in a Rambler.

THE CAR OF STEADY SERVICE

Thomas B. Jeffery & Company, Main Office and Factory: **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, September 10, 1908. No. 24

FULL SETTLEMENT NOW IN SIGHT

Two Weeks Further Allowed for Pope Reorganization, now Certain—Court Delays Order for Third Dividend.

In the Chancery Court at Newark, N. J., on Tuesday last, 8th inst., Vice-Chancellor Howell continued for two weeks an order directing parties in interest to show cause why the receivers for the Pope Mfg. Co. should not be compelled to pay a third dividend of 25 per cent. to the holders of approved claims.

It was represented to the court by Percy S. Bryant, counsel for the creditors' committee, that the receivers have on deposit in various banks cash in excess of $800,000, and that $379,000 would suffice for the payment of the dividends.

The application was opposed by Sherrerd Depue, representing the receivers. Mr. Depue read a communication from George A. Yule, who was appointed one of three receivers at the instance of the creditors' committee, in which Mr. Yule stated that he was not in favor of granting the application at present. Mr. Depue stated further that the time limit for the adoption of a proposed reorganization plan expired on Tuesday and he urged that the outcome of that proposition should be awaited. The plan, he said, provided for the payment in full of all claims immediately upon its adoption. It is understood that a sufficient number of shares has been deposited with the stockholders' committee to assure the success of the reorganization plan as outlined.

The vice-chancellor disposed of the application by saying that he thought he ought to give the reorganization scheme a chance and to that end he continued the application to September 22.

Half Million Dollar Fire in Boston.

Fire from an unknown cause destroyed all but the second floor of the big Taylor-Palmer garage, at 169-171 Huntington avenue, Boston, on Sunday last, 6th inst. Seven employes were in the building at the time the fire was discovered eating its way from the basement to the first boor, and they had time to remove only two cars from the building before the kames gained headway. Between 50 and 60 cars were destroyed, a majority of them belonging to Boston people who are away for the summer. The loss is estimated at about $500,000.

Court Authorizes Pope-Waverly Sale.

As soon as the Indiana court has had an opportunity to give its approval, of which approval there is practically no doubt, the sale of the Pope-Waverly plant in Indianapolis will be consummated by the receivers of the Pope Motor Car Co. to the interests represented by Herbert H. Rice and Wilbur C. Johnson. The chancery court of New Jersey, under the laws of which state the Pope company is incorporated, gave its authority for the sale when the receivers' petition was considered on Tuesday last, 8th inst., and the matter now passes to the Indiana courts within whose actual jurisdiction the factory is located. Messrs. Rice and Johnson, who are connected with the management of the Pope-Waverly business, offered $200,000 for the entire assets, less the cash in bank, and it is this bid that will be accepted. The cash in bank on June 30th last, which will be excepted by the terms of the sale, amounted to $106,420.71.

Muncie Sees Big Factory Coming.

According to press despatches from Muncie, Ind., as soon as title to the site can be obtained, "the construction of a large automobile factory to employ several hundred persons will be started immediately." The factory, it is stated, will be financed by Thomas F. Hart and Madison Maring, Muncie capitalists, and outside interests, "who have practically obtained all the patents for the manufacture of a well known car and who will turn out a machine almost identical with one that has been a success on the market for several years"—name not mentioned.

TO SUE OLDS AND BUICK

A. L. A. M. Makes Sensational Moves—Takes Action to Collect Olds's and Buick's Arrears and to Cancel the Olds License—No Space in Show for Either Concern.

Although surface appearances indicated that little if anything outside of the usual routine was transacted at the meeting of the board of managers of the Association of Licensed Automobile Manufacturers at their New York offices on Thursday last, 3d inst., it has leaked out that sensational action was taken affecting two of the prominent members of the organization, viz.: the Olds Motor Works, of Lansing, and the Buick Motor Co., of Jackson, Mich.

It seems that both of these companies were among the number that withheld payment of the Selden royalty pending the adjustment of the demand for a reduction of the royalty fee, which reduction was authorized by the courts in June last. and which was made apply to the two quarterly settlements then overdue. According to the best information obtainable, Olds and Buick have not only not made those payments, but have neglected or refused to make settlements for the succeeding quarter. All efforts to amicably obtain the amounts due for the period of nine months having failed the A. L. A. M. last week agreed that the time for temporizing having past, stern action was necessary.

To that end, a resolution was unanimously adopted which requests the Electric Vehicle Co., as the owner of the Selden patent, to institute legal proceedings for the collection of both the Olds and the Buick accounts and also in the case of the Olds Motor Works to have it show cause why its license under the Selden patent should not be revoked and cancelled. For some unknown reason, no effort will be made to nullify the Buick license, at least, not at

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this time. Additional significance is added to the situation by the fact that in the allotment of space at the forthcoming Madison Square Garden show, which was made last week, Olds and Buick were passed over and did not share in the apportionment.

This action on the part of the A. L. A. M. is certain to create a furore. None outside of its innermost circles even suspected that anything of the sort was in contemplation, at any rate, not so far as the Olds interests are concerned. The Olds Motor Works was one of the original members of the association and has always stood high in its councils and played an active and conspicuous part in its affairs, F. L. Smith, general manager of the Olds company, having been at one time president of the A. L. A. M. According to one story, the Olds people were opposed to the grant of a license which recently was issued and assumed their present attitude as evidence of their displeasure. The Buick Motor Co., on the other hand, never has been active in the association's affairs and rarely has been represented at its meetings despite the fact that it has profited enormously from its membership. It has been one of the few Selden licensees making a low priced car and because of the exclusive agency policy that obtains in the licensed organization, the Buick company, almost without effort, has been able to secure agents and place its goods in a great number of desirable places.

W. C. Durant, general manager of the Buick company, was among those present at last Thursday's meeting at which this radical action was determined, but the Olds interests were not represented. At the same meeting of the A. L. A. M., a step also was taken to open wider the door of the association and to disprove reports that the bars are up against additions to the membership. The step took the form of a resolution, passed without a dissenting voice, which made it the sense of the meeting that applications of other manufacturers who measure up to the A. L. A. M. standard be considered.

Those in attendance at the meeting were as follows: Autocar Co., Marcus L. Brock; Buick Motor Co., W. C. Durant; Cadillac Motor Car Co., W. C. Leland; Corbin Motor Vehicle Corp., M. S. Hart; Chalmers-Detroit Motor Co., R. D. Chapin; Electric Vehicle Co., H. W. Nickolls; Elmore Mfg. Co., J. H. Becker; H. H. Franklin Mfg. Co., G. H. Stillwell; Hewitt Motor Co., E. R. Hewitt, R. C. Gildersleeve; Locomobile Co. of America, S. T. Davis, Jr., A. W. Robinson; Lozier Motor Co., H. A. Lozier, Jr.; Matheson Motor Car Co., C. W. Matheson; Northern Motor Car Co., V. M. Gunderson; Packard Motor Car Co., H. B. Joy, M. J. Budlong; Peerless Motor Car Co., L. H. Kittredge; George N. Pierce Co., Chas. Clifton; Pope Mfg. Co., C. E. Walker; Pope Motor Car Co., George Pope; Royal Motor Car Co., E. D. Shurmer; Selden Motor Vehicle Co., R. H. Salmons; F. B. Stearns Co., F. B. Stearns; Stevens-Duryea Co., C. C. Hildebrand; Studebaker Automobile Co., W. E. Metzger; E. R. Thomas Motor Co., E. R. Thomas; Waltham Mfg. Co., E. S. Church, O. G. Bechtel; Winton Motor Carriage Co., Thomas Henderson; and E. P. Chalfant, assistant general manager A. L. A. M.

The Week's Incorporations.

Louisville, Ky.—Miles Auto Co., The, under Kentucky laws, with $10,000 capital. Corporators—Leon L. Miles, William H. Curtis, Sr., and Ada B. Harris.

Dover, Del.—International Auto Cab Co., under Delaware laws, with $500,000 capital. Corporators—F. P. Jones, F. W. Mills, E. J. Forham, New York City, N. Y.

Chattanooga, Tenn.—Burk Auto Co., The, under Tennessee laws, with $10,000 capital. Corporators—Anton Pyron, Thomas W. Fritts, Sidney B. Elmore, Albert Rodgers and W. W. Burk.

Denver, Col.—Denver Auto Service Co., under Colorado laws, with $100,000 capital. Corporators—J. Wesley Smith, Rodney J. Bardwell, W. V. Elliott, R. C. Hecox and C. H. Smith.

Indianapolis, Ind.—Southern Indiana Automobile Co., under Indiana laws, with $30,000 capital. Corporators—Harley Jackson, William P. Masters, Fred Everback, Isaac Elbert and Clark B. Davis.

New York City, N. Y.—Precision Tool & Instrument Co., under New York laws, with $100,000 capital; to manufacture engines, machinery, motors, tools, etc. Corporators—J. A. Straussman, E. M. Munn, New York City, N. Y.; J. F. Brown, Brooklyn, N. Y.

In the Retail World.

The Milford Auto Machine Co., Milford, Mass., is about to remodel and enlarge its present premises; the addition will be 40x30 feet.

Fire last week completely destroyed Edward C. Truncer's garage at 77 Virginia place, Buffalo, N. Y. Ten automobiles were wrecked, the total loss being more than $25,000.

The Elmore Motor Co., of Los Angeles, has begun the erection of its new garage at 742 South Olive street. Its dimensions will be 80x167, and it will contain all modern improvements.

J. F. Ollinger has purchased an interest in the Center Motor Car Co., Salina, Kan. His entry has carried with it a change in the name of the concern to the Ollinger-Center Motor Car Company.

T. G. Patterson and Dr. William Marseilles have rented a disused candy factory on North Washington street, Clinton, Mo., and will remodel and use it as a garage. The first named will have active charge of the business.

The Smith-Clemens-Hopping Garage, at Dayton, Ohio, has removed to the Majestic rink building, that city. There has been no change in the personnel of the company as has been reported, and it will continue to handle the same line of cars next season, namely, Thomas, Chalmers-Detroit, Cartercar and Columbus.

George S. Hill, the directing head of the Hill Garage, at Haverhill, Mass., has withdrawn, and Elmer C. Bassett, of Boston, assumes the position of manager; Bassett has secured a controlling interest in the plant and business.

The automobile, bicycle and sporting goods department of House & Herrmann, Wheeling, W. Va., has been purchased outright by Wesley T. House. The new owner has managed this department of the business since it was started.

The Denver Automobile Service Co. has been incorporated in the Colorado city of that name to do a general automobile business. J. Wesley Smith, Rodney J. Bardwell, Willis V. Elliott, Roy C. Hecox and Charles H. Smith are the corporators.

Willis, Haywood & Holcomb is the name of a new company that has opened in Indianapolis. The garage at 330 North Illinois street, formerly occupied by the Fisher Automobile Co., has been remodeled, for the exploitation of Packard cars.

H. J. Donohue, a retired merchant of Sumner county, Kan., now located at 351 North Topeka avenue, Wichita, has decided to enter the business arena again. This time it will be automobiles instead of dry goods, and the Lambert is the car he has decided to represent.

A short circuit of electric light wires causing an explosion of gasolene was responsible for the burning of the garage of Ball & Staolers at Devils Lake, N. D., on August 27th. Twenty cars were saved but the loss to machinery and building amounted to $15,000, on which there was no insurance. The garage was one of the largest in North Dakota.

The Ellis Motor Car Co., Newark, N. J., has moved into its new building, 124-126 Washington street, where it will continue to handle the Pierce-Arrow cars. The building, erected expressly for the company, is about 50 feet wide, 100 deep, two stories high in front, and is of fireproof construction. The ground floor is used as a salesroom and garage. The repair shop and storeroom occupy the second story.

The Apthorpe Motor Car Co, is the style of a new concern which has taken possession of the new fireproof garage at 214-216 West Eightieth street, New York. In addition to doing a general garage and repair business, the agency for a line of high-grade cars will be taken on. Fred S. Dickinson is the active man in the company which he states will make a specialty of paying real attention to its patrons' cars instead of paying commissions to chauffeurs.

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JULY ANOTHER MONTH OF DECLINE

Export Figures Show a Continued Decrease with Gains in Only Four Countries—The Showing for Seven Months.

No upward tendency in the export of American motor cars and parts came about during the month of July, the total for the month being $643,901 as against $796,325 for the corresponding month in 1907. The returns, of course, brought no improvement for the record of the year so far, and the total for the seven months ending with July was $3,613,941 as against $4.245,490 for the same period last year.

Declines for the month are shown in all but four of the fourteen divisions in which exportations are grouped, the increases being one from $21.992 to $54,555 in "Other Europe", a gain from $1,585 to $5,497 in British East Indies, an advance from $5,731 to $11,247 in Other Asia and Oceania, and an increase from 183,508 to $191,927 in British North America. The more notable declines are those of France, Germany, Italy and Mexico. The exports to France dropped from $121,627 to $53,602 for the month, Germany from $47,720 to $22,744. Mexico from $49,113 to $11,726, and Italy from $14,161 to zero. The loss in the case of the United Kingdom, the biggest customer on the list, was more limited in proportion being a decrease from $301,126 to $273,396.

The seven months' record shows a total gain in the case of the United Kingdom, the figures for 1907 and 1908, respectively, being $1,335,170 and $1,365,561. France, too, despite the July showing, records a gain for the seven months, from $482,868 to $510,758. The trade with Other Asia and Oceania, which showed a July gain, has almost doubled during the first part of this year, with an increase from $45,828 to $88,273. The division known as "Other Countries" also records a seven months' gain, from $7,005 to $18,235.

The record in detail is as follows:

	July		Seven Months Ending July		
	1907	1908	1906	1907	1908
Automobiles, and parts of	.....	.....	$2,356,110	.....	.....
Automobiles	$727,391	$588,560	$485,672	$3,825,969	$3,223,166
Parts of	68,934	55,341	27,507	419,521	390,775
Exported to—					
United Kingdom	301,126	273,396	829,913	1,335,170	1,365,561
France	121,627	53,602	256,036	482,868	510,758
Germany	47,720	22,744	100,106	144,843	123,531
Italy	14,161	.....	233,872	241,100	219,136
Other Europe	21,992	54,555	163,975	233,234	164,554
British North America	183,508	191,927	506,133	900,386	692,836
Mexico	49,113	11,726	381,367	452,611	187,034
West Indies and Bermuda	10,028	5,885	189,282	153,350	105,523
South America	31,821	7,003	72,316	128,490	79,850
British East Indies	1,585	5,497	21,317	19,724	17,560
British Australasia	3,560	4,362	76,833	94,855	37,734
Other Asia and Oceania	5,731	11,247	24,436	45,828	88,273
Africa	3,735	1,930	9,622	6,026	3,356
Other countries	618	27	4,081	7,005	18,235
Total automobiles and parts of	$796,325	$643,901	$2,869,289	$4,245,490	$3,613,941

Engineers to Meet in Cleveland.

Cleveland has been selected as the place for the third quarterly meeting of the Society of Automobile Engineers, on September 18 and 19 next. The Hollenden House will be the headquarters and the program as already outlined will devote considerable time to visiting automobile plants located in Cleveland. The entire morning of the first day will be given over to this, followed by a lunch to be arranged for by the local committee. The afternoon and evening will be devoted to the business meeting and the reading of papers. On the second day a train will be taken to Akron for a visit to the Diamond and other tire plants in that city. The visiting members will be guests of the Diamond Rubber company at a lunch to be given at the Akron County Club. Afterward the Society will go to Canton, where they will visit the plant of the Timken Roller Bearing Axle Co., and the members will be guests of the latter company until their departure from Canton in the evening.

Pittsburg Dealers' Association Election.

At its annual meeting on Thursday last, 3d inst., the Automobile Dealers' Association of Pittsburg elected the following officers: W. H. Murray, president; A. L. Banker, vice-president; Charles F. McLaughlin, secretary; U. P. Moore, treasurer. The Diamond Automobile Co., the Maxwell-Briscoe Pittsburg Co., and the White Co. were added to the membership.

Franklin Adds New Factory Building.

The H. H. Franklin Mfg. Co., are just taking possession of the latest addition to their factory. It is a concrete fire-proof building 97 by 62 feet, five stories high. This building will permit of a greater production of both commercial vehicles and motor cabs.

Building a Factory in Galesburg.

Work on the construction of an automobile factory in Galesburg, Ill., for E. H. Ovelhort is reported as having commenced last week. The building will be of concrete, 60 by 100 feet.

AGAIN THE SPRING WHEEL APPEARS

Latest of the Family Arises in Far Off Arizona—$3,000,000 Company to Make It Go Around.

If the plans of H. O. Jackson and G. F. Randall do not go awry, the poor old pneumatic tire which has endured so many years will have a lot of air let out of it. Its old familiar enemy, the spring wheel, is giving it another poke, so to speak. Messrs Jackson and Randall are the exploiters of the very latest of the large family of spring wheels, the first of which appeared when the bicycle was young and tender.

The two gentlemen, with Jackson as president, and Randall as secretary-treasurer, have formed a $3,000,000 company and incorporated it away out in Arizona, where the Grand Canyon is located. Quite a bunch of the three millions in shares is for sale and if any one desires any of it he has but to speak up and produce the coin.

The first news of the big flotation came not from far off Arizona, but from the little town of Batavia, in Illinois. Mr. Randall appeared there last week in a solid tired automobile equipped with his spiral spring wheels, and "showed" the natives how he could drive over tacks and broken glass and bounce up and down. It tickled their fancy so well that it is stated that the Batavians purchased some $5,000 worth of the Arizona paper.

Lausen Changes Name; Will Produce Cars.

The C. P. & J. Lausen Co., which has been making gasolene engines at 841-847 Thirtieth street, Milwaukee, has increased its capital stock from $75,000 to $150,000, and will henceforth be known as the Christenson Engineering Co. The present plant will be enlarged to provide facilities for the manufacture of complete cars.

Continental Adds New Flat Tread Tire.

The Continental Caoutchouc Co. this week announced the addition of a new tire to its line, the A. C. Flat Tread as it is styled. It has a corrugated surface and will be sold at round tread prices and with a 3,500 miles guarantee. It is particularly designed for use on heavy, low powered cars.

Marvel May Locate in Elkhart.

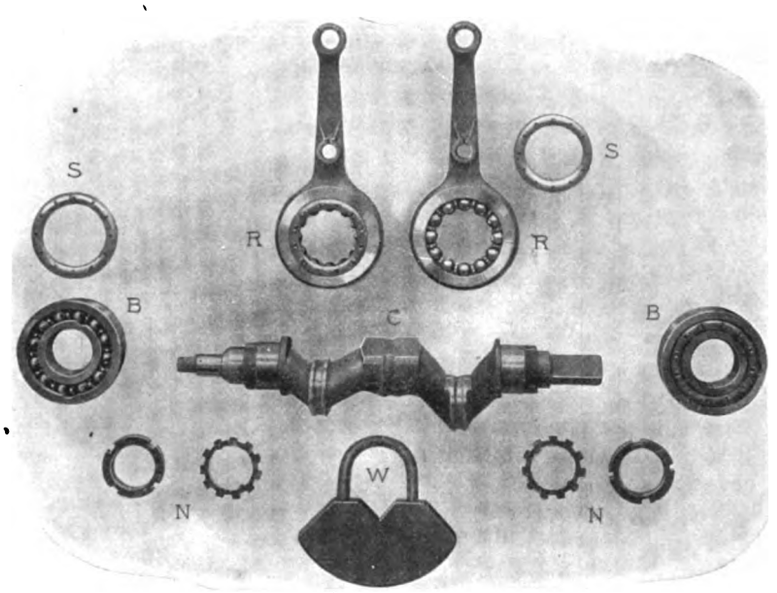
The Marvel Automobile Co., of Detroit, is reported negotiating for a disused factory building in Elkhart, Ind. J. C. Forster, president of the concern, was in Elkhart last week looking over the ground.

Stewart & Clark to Open in New York.

The Stewart & Clark Mfg. Co., of Chicago, manufacturers of the Stewart speedometer, are making ready to establish a branch in New York. It will open soon.

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The Simplicity of
THE WHITE STEAM CAR



In the principles of construction—as in the method of operation—the White Steam Car is simpler than any other type of automobile. Consider, for example, the design of the White crank-shaft and compare it with the corresponding member in other cars. In the above illustration is shown the crank-shaft of the 1909 White engine and all the parts attached thereto. The crank-shaft, C, is a short one-piece forging of tool steel with but two main bearings, B,B. These bearings may be removed by taking off the lock nuts and lock washers, N,N. The two connecting rods R,R, are one-piece forgings fitted with ball bearings, as shown. With the addition of the counter weight, W, the crank-shaft is complete.

In all accepted types of gasoline engines there are from three to seven main bearings. As is well known, when any shaft has more than two bearings, there is the ever-present danger that they will work out of alignment. Moreover, the crankshaft of the gasoline engine has either four or six connecting rod bearings, which are invariably only plain bearings instead of ball bearings. It will thus be seen that there are only from one-half to one-third of the number of parts used in connection with the White crank-shaft as are used in connection with the crank-shaft of a gasoline engine.

Next week we shall compare the two valves of the White engine with the eight or twelve valves of the gasoline engine.

Write for circular containg details of the new White cars.

THE WHITE COMPANY
CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St.
BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St.
PITTSBURG, 138-48 Beatty St.
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CHICAGO, 240 Michigan Ave.
SAN FRANCISCO, 1460 Market St.
ATLANTA, 120-122 Marietta St.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, SEPTEMBER 10, 1908

No Cause for Compromise or Controversy.

During the past week, the air and the New York newspapers have been charged with reports that a compromise was in sight in the A. A. A.-A. C. A. controversy. These reports, which significantly enough came chiefly from those who manufactured the controversy, stated that the manufacturers had taken a hand in the matter and likely would force a settlement; and undoubtedly several manufacturers did seek to pour oil on the troubled water, but without effect. The lack of results is not surprising; for it is difficult to discern what there is to compromise.

Shorn of the elements of personal greed and personal grudges, which are at the bottom of the whole affair, it is not easy to see wherein the American Automobile Association has anything to arbitrate. It has not made war on any person or any organization. It simply stands for America and American institutions, of which the Vanderbilt cup race is one. On the other hand, the so-called Automobile Club of America, which stands for Europe and European institutions, has made war on the Vanderbilt race. It has promoted a counter event for no other purpose than to injure America's classic race. The American manufacturers, almost as a unit, had declared that they wanted no additions to the list of these big, expensive sporting projects, but their wishes had no weight with the Automobile Club. Its position has been assumed almost wholly to maintain its own repute abroad and to becloud the fact that its attitude and its antagonism toward the A. A. A. grew out of the petulancy of several of its wealthy and more or less important members who, unable longer to dictate to and domineer all the other clubs in New York State, were unwilling to submit to the will of the majority—a truth which the club rightfully is anxious to put as far as possible behind it.

The issues, if such they may be called, are, therefore, very clear and very simple. Individually, the manufacturers, not a few of whom do not even know "what it all is about," hesitate to "take sides," that is, actively, although collectively their national association has placed them on record as supporting the American Automobile Association, than which no other stand is conceivable. But as a matter of calm fact, the American automobile manufacturers owe little, if anything, to the misnamed Automobile Club of America. Its present attitude is in keeping with its past history. It was pro-foreign from its inception. It is pro-foreign to-day. It is American chiefly in name and in membership. It is less than a year ago that one of its former presidents, addressing the American manufacturers, whose guest he was at the time, patronizingly told them that when their cars were as good as those produced abroad, possibly more of them would be used by the members of his club. It was a remark that is a fair index of the policy that rules the club and has ruled it from its beginning.

If, say, such an organization as the Automobile Importers Association of New York, or of America, engineered such a spite race as the A. C. A. is engineering and on the same alleged grounds, to maintain its reputation abroad, also some foreign rules, no American manufacturer would hesitate a moment in giving proof of where he stands. There is not more occasion for hesitancy on the present occasion. If the Vanderbilt cup race is not a signal success, the foreign nations will hug themselves for joy. Its failure or partial success will be their victory. American manufacturers will do well to take this fact close to their hearts.

The Automobile Club of America is just as much of a local body as the Automobile Club of Cohoes. Its dominion extends no further, at least, in this country. By grace of its good friends in Europe, it is able to say that its disqualifications will be respected abroad. But how many Americans have raced abroad or expect to race abroad?

The only real issue is whether, in the interests of Europe, the Automobile Club of America shall be permitted to injure a genuinely American institution and whether American manufacturers will stand aside and see the injury done. As for controversy or cause for compromise, there is none. The A. C. A. is a local club of less than 2,000 members. The A. A. A. is a national organization with 20,000 members. A local club and a national association of whatever nature can have no quarrel over the right of national government.

Importance of the Country Markets.

Like the question of what becomes of all the needles and pins, it is sometimes difficult for any one having a realization of the enormous motor car production in the United States at the present time to conjecture where all the cars go to. The increase of cars in the larger cities, while noticeable, is not sufficient to account for more than a very small part of the total production. The exports of American automobiles, although reaching very respectable figures, likewise answer for a comparatively modest proportion of the output. If, then, the larger cities and the export markets absorb only a minority of the machines, it follows that the small towns and the country must take the balance. And such is actually the case, the small town and country trade at present forming the largest and steadiest market that the makers have.

Some makers there are who concentrate their selling efforts chiefly on the large cities, and the nature of their product is such as to necessitate this policy more or less, since their cars are of a style and price that makes their purchase in small towns quite unlikely. Other manufacturers have paid special attention to the rich field offered by the small towns and the country districts and have left the large

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cities pretty well alone. As a result their metropolitan fame is nil, but their sales are in many instances many times larger than surface indications would suggest.

Many causes contribute to make the small town a good market for cars. The fairly prosperous resident of a small town has more reasons for the purchase of a car than the city dweller of equal income, and the housing and maintenance of a machine is cheaper for him than it is for his urban brother. The latter is generally well provided with transit facilities between his home and his place of business, and to indulge in the luxury of an automobile means the paying of high city rentals for garage space and altitudinous prices for service and supplies. The activities of a small town resident, on the other hand, are generally so distributed over a fairly wide topographical area as to make the purchase of a car a wise and judicious business investment for purely transportation purposes, quite aside from the pleasure features. No high rentals attach to such ground as he may use for a private garage, while if he entrusts his machine to a local garage concern, the latter is able to make a much better rate than a city establishment. Such excursions as the city automobile owner makes to the outlying districts are generally for pleasure purposes, with no utilitarian justification, but the owner in a small community has frequent occasion to drive to the city on business as well as pleasure. The main element of difference between the two classes, therefore, is that to the city man the automobile is an adventitious luxury to be employed during his leisure hours and to be paid for at a stiff figure for garaging and supplies, while to the resident of the small community a car is a practical aid in his daily affairs, providing him with better transportation than horses afford and giving him ready access to the city when necessary, all at a cost that makes motoring attractive.

The heavy buying of the Middle West, which has during the past year been one of the strongest factors in the trade, is not accounted for by the big cities. The careful cultivation of the small towns by sales organizations designed with that end in view, was what accomplished such remarkable results. In New England, while the sales are credited chiefly to the city agencies, the bulk of the orders have come from the small towns, all within such easy access of the cities, however, as to permit the city agencies to handle the business. The Southwest presents examples of towns so insignificant in size and population as to be mere flyspecks on county maps, which nevertheless have motor car salesrooms and garages enough to make impressive "automobile rows." These establishments find their support in the demand for cars for cross country traveling.

From the low priced buggy type vehicles up to the latest six cylinder machines, the small towns are, as a whole, outstripping the big cities in the volume of their purchases, only drawing the line at some of the highly refined, ornate and expensive limousine body creations which cannot be sold except in the cities, owing to the limited call for electric lights, satin wall tufting, and folding bridge sets and escritoires. The wise manufacturer and the wise sales manager will not overlook the true nature of the sales situation simply through a desire to shine in the big cities.

Salesmen for motor goods, especially the wholesale men visiting the trade, must needs be well equipped with a mass of information and prices that would make the ordinary citizen dizzy. Many of them carry elaborate price books for ready reference, but others, through long practice are able to quote entirely from the head. There is a great demand among the wholesale supply houses for men who are capable of selling this class of goods, since the business requires quite a range of technical information and real selling ability, as well.

As an instance of how carefully salesmen in this line look after their customers, one of the most successful travelers has recently developed a scheme which has swelled his order list quite a little. In a specially ruled memorandum book he keeps a record of the purchases of each of his customers for the year, and before going to see a customer, a few minutes study of the book discloses just what he has bought in the past. After the latter has given orders for everything he thinks he needs, the salesman calls his attention to the fact that in the past he has at about this time put in a stock of this or that, and gives him a list to investigate as to how his stock stands.

It is nearly always the case that the salesman thus is able to point out deficiencies in the dealer's stock that the latter would quite have overlooked had not the salesman kept track of the course of his purchases through the year.

COMING EVENTS

September 7-12, Hartford, Conn.—Connecticut State Fair Association's outdoor show and grand circuit races at Charter Oak Park.

September 11-12, Brighton Beach, L. I.—Motor Racing Association's 24 hours race, Brighton track.

September 11, Springfield, Mass.—Springfield Automobile Club's hill climb on Wilbraham hill.

September 12, Louisville, Ky.—Louisville Automobile Club's race meet at Churchill Downs.

September 14, Chicago, Ill.—Chicago Motor Club's annual economy run.

September 16-17, Long Island—New York Automobile Trade Association's mechanical efficiency test, New York to Montauk Point and return.

September 23-24, New York City.—Dust trials, smokeless exhaust and brake tests, under auspices of New York Automobile Trade Association, Central Park.

September 20, San Francisco, Cal.—Olympic Athletic Club's race meet at Tanforan Park.

September 20-30—Kansas City Automobile Club's endurance run, Kansas City, Mo., to Oklahoma City, Okla., and return.

September 23-24, Boston, Mass.—Bay State Automobile Association's 24 hours endurance run, Boston to Bretton Woods, N. H.

October 6-9, Chicago, Ill.—Chicago Motor Club's 1,000 miles reliability run.

October 7, Philadelphia, Pa.—Quaker City Motor Club's 200 miles road race, Fairmount Park.

October 10, Long Island—Elimination trials for Vanderbilt cup contest.

October 17, Hartford, Conn.—Automobile Club of Hartford's hill climb, Avon Mountain.

October 24, Long Island.—Vanderbilt cup contest.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

January 23-30, Philadelphia, Pa.—Philadelphia Automobile Trade Association's annual show.

February 6-13, Chicago, Ill.—National Association of Automobile Manufacturers' show, Coliseum.

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STRANG RUNS AWAY AT LOWDLL

Struggle in 254 Miles Road Race is All for Second Place, Strang Leading by 92 Minutes—One Contestant Disqualified—Big Attendance.

In one of the greatest runaway road races ever held, Lewis Putnam Strang, on Monday last, 7th inst., won the Lowell Automobile Club's 254 miles road race over the Merrimac Valley course at Lowell, Mass. Strang covered the distance in 4 hours 42 minutes 35 seconds, an average speed of 53. miles an hour, and finished 1 hour 32 minutes 23 seconds ahead of his nearest competitor—H. F. Grant, in a six-cylinder American Locomotive car.

Strang drove the same Italian made Isotta-Fraschini car which he piloted to victory in the Savannah and the Briarcliff races and the remarkable feature has been Strang's luck with tires. In none of these events has he stopped once on account of tire trouble; and this fact enabled him to draw out a big lead in the race last Monday, while the other competitors were having their troubles with punctures. Strang also had the glory of making the fastest lap of 10.6 miles in the race, covering the sixth lap in 10:53.

William Bourque, in a Knox car, was third in 6:33:29, and George Robertson, Fiat, was fourth in 6:38:31. There were seven starters, but these four were the only ones to finish. Robert Burman in a Buick was making a good fight for second place, when he was disqualified after completing the 21st lap, because he had employed outside help in putting a new radiator and one or two other things on his car.

Of the remaining two starters, Frank Lescault, in a Simplex, was slipping into second place when he had cylinder trouble and withdrew in the 20th round. Charles Basle, in the second Knox car, had trouble early in the game. The bearings of the connecting rod burned out and could not be replaced. The French driver of the American car was tagged out in the 8th lap.

While the race was not the greatest contest that has been held in America, it was, however, an interesting struggle, but most



LEWIS P. STRANG

of this interest was confined to the fight for second place. Very early in the race Strang secured the lead and after that he was never headed, streaking around in the lead every time. The fight for second place, on the other hand, was exciting, as it was not until the last lap that it was assured for Grant.

Possibly it was this fact that kept the big crowd from surging on the course after the first car finished. In the Vanderbilt, the Briarcliff and other races it has been impossible to hold the crowd in check after



LEO ANDERSON, STRANG'S MECHANICIAN

the first two or three cars have finished, and at the Lowell race, where the winner finished from one and a half to two hours ahead of the field, it is bordering on the marvelous that the combined policing and interest of the spectators in the struggle for second place was sufficient to allow the race to finish as races should. In this respect the contest at Lowell was notable.

Another feature well worth mentioning is the fact that the start of last Monday's race did not have any of the flavor of starts of Vanderbilts proper and elimination, Savannah, Briarcliff and other events. In all these the starts have been made at the unearthly hour of sometime between the beginning of daybreak and thrifty farmers' breakfast time—a time when well regulated people are taking their beauty naps. At Lowell the spectators had a chance to get this woodburysnooze plus breakfast and then be on time to watch the cars and drivers make their getaway.

The stage setting of the Lowell affair was like those of other important road events. The thrifty New England farmers were even thriftier than the Long Island and Westchester county tillers of the soil in erecting grandstands, transforming hay fields into parking places, and selling hot coffee and sandwiches in return for the large amount of loose change that always sprinkles plentifully around the scene of a big event of any kind. The Lowell race had not only its "hairpin curve," which was not so very terrible after all, but it also had a "dip of death." This was nothing more than a slight uphill and down again piece of road which would scarcely be honored with the name "hill" in Westchester county, New York. And, as frequently happens on "dips of death" and "hairpin curves," killings persistently refused to happen. In fact, exclusive of tire trouble and a few minor engine mishaps there was not a thriller of any kind, except a few incidents that caused the grandstand crowds at the starting and finishing line to sit up and take notice.

There were only a few occasions when cars came down the stretch in close proximity and therefore the race was not a pronounced success from the spectacular point of view. Once the Fiat and the Simplex came tearing along within a few yards of each other, making a pretty race, and toward the late afternoon the three cars left in the race after Strang had finished, fol-

SUMMARY OF THE RACE BY LAPS.

	Driver.	Machine.	1	2	3	4	5	6	7	8	9	10	11
1	Lewis Strang	Isotta-Fraschini	0:11:42	0:25:25	0:34:25	0:46:28	0:59:06	1:09:59	1:21:48	1:33:28	1:44:45	1:56:35	2:08:09
2	H. F. Grant	Am. Loco	0:36:25	0:48:15	1:02:08	1:35:40	1:47:24	1:58:55	2:19:30	2:31:00	2:42:44	2:54:21	3:06:16
3	Wm. Bourque	Knox	0:14:06	0:26:20	0:41:28	0:53:41	1:40:40	1:52:54	2:05:17	2:18:04	2:30:35	2:42:59	2:55:24
4	Geo. Robertson	Fiat	0:11:43	0:23:45	1:08:22	1:59:56	2:12:05	2:23:50	2:36:02	2:47:12	2:59:63	3:10:01	3:22:34
	Frank Lescault	Simplex	1:12:21	0:24:30	0:36:50	0:48:50	1:01:06	1:13:18	1:25:53	1:40:55	1:52:56	2:04:56	2:16:54
	Robert Burman	Buick	0:13:33	0:25:26	0:38:40	0:50:32	1:02:21	1:15:49	1:27:27	1:39:07	1:50:44	2:02:32	2:14:17
	Chas. Basle	Knox	0:27:57	0:45:18	1:06:21	1:29:28	1:41:19	1:53:11	2:04:51	Withdrawn			

		12	13	14	15	16	17	18	19	20	21	22	23	24
1	Lewis Strang													
2	H. F. Grant	2:20:22	2:31:46	2:44:12	2:56:06	3:07:58	3:19:37	3:31:16	3:42:43	3:57:05	4:05:50	4:17:35	4:30:49	4:42:35
3	Wm. Bourque	3:18:05	3:40:45	3:52:59	4:09:18	4:28:04	4:40:44	4:53:25	5:03:49	5:18:44	5:30:31	5:42:57	5:56:11	6:14:58
4	Geo. Robertson	3:07:48	3:26:35	3:43:45	4:10:41	4:23:50	4:37:12	4:50:15	5:10:38	5:23:28	5:36:54	5:57:07	6:16:46	6:33:29
	Frank Lescault	3:37:10	3:48:57	3:52:55	4:06:01	4:28:25	5:00:57	5:15:50	5:29:19	5:43:10	5:52:48	6:09:57	6:20:57	6:38:31
	Robert Burman	2:28:58	2:48:17	3:04:08	3:16:11	3:28:11	3:40:19	3:57:57	4:06:00	Withdrawn				
	Chas. Basle	2:26:53	Disqualified											

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lowed at distances of something like a few hundred yards apart. At another time Strang and Burman gave the people at the hairpin turn a scare as the two cars came whirling along with Strang almost on top of the other. The road liners fell back and Burman's mechanic looked anxious, but Strang laughed and the instant he had the room to pass, scurried by in a cloud of dust.

An unusual incident occurred at the grandstand when Grant in the American Locomotive car came whirling along at the finish of one lap. The left front tire rolled off and indulged in an impromptu race. Grant had power in his car while the tire had only impetus to carry it along and it lost out, while Grant continued some miles before he put on another tire.

The day was ideal for the race. Thousands of people poured into Lowell the night before and all the hotels did more business than at any other time in the history of the manufacturing city. In the morning the throng was augmented by the thousands that came out from Boston and other nearby cities while touring parties made the region of the 10 miles circuit their objective point.

Despite the presence of a variably estimated crowd of from 70,000 to 150,000, there was no sign of congestion anywhere. The people scattered themselves around the course rather evenly, so that the work of the police and officials was considerably lightened. The grandstand was fairly well filled and a section of the official and press stand, which was reserved for members of the Massachusetts legislature, for, be it known, that it had required a special act of the legislature to make the race possible, also was well filled. A lot of men who never again will be mistaken for senators and representatives, were in this coop.

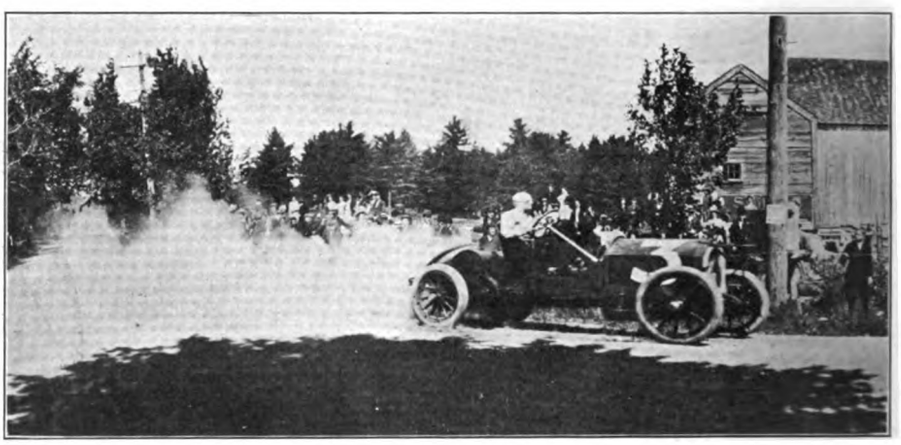
The course was in splendid condition, although a few more barrels of oil would not have been wasted. It was laid out in the beautiful Merrimac Valley over 10½ miles of good road, the finishing stretch being over the broad, level Pawtucket boulevard. From the starting point it went around through Tygnsboro and over Varnum avenue to Dunbar street, thence turning into the boulevard. Varnum avenue, or the back stretch, was somewhat rough, but even so, the drivers agreed that it was smoother than the best parts of the Briarcliff course.

The danger points of the course were supposed to be the "hairpin curve" at the Tyngsboro end, and the "dip of death," but at these points nothing of interest occurred. The Varnum avenue turn into Dunbar avenue was treated with as much respect by the drivers as any other point.

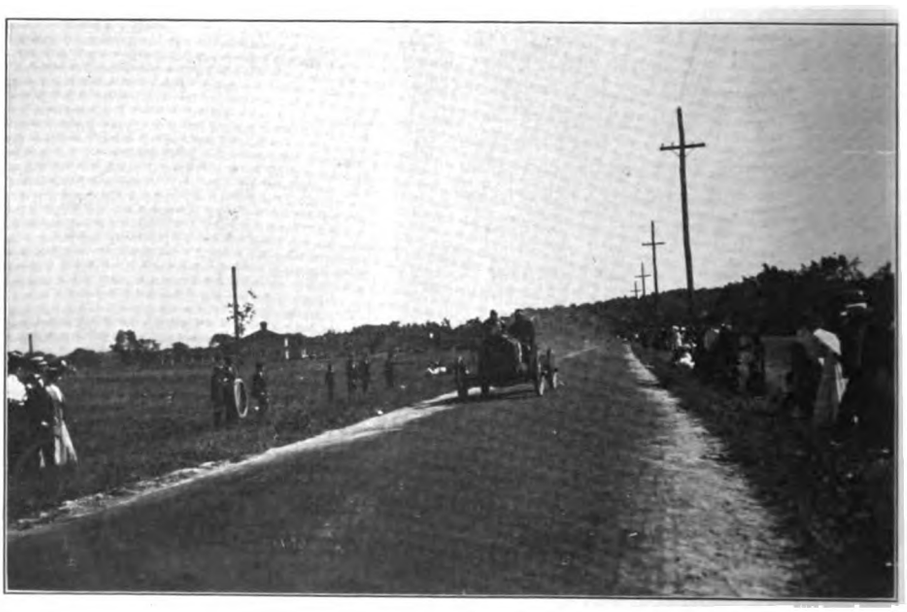
The policing was excellent. Captain Gardner W. Pearson had at his disposal the four militia companies of Lowell recruited to war strength largely by former members, and one company from Lawrence, Mass. These were in addition to



TYPICAL VIEW OF THE START—LESCAULT STARTING



STRANG TAKING ONE OF THE BAD TURNS



"GOING SOME" ON THE BOULEVARD

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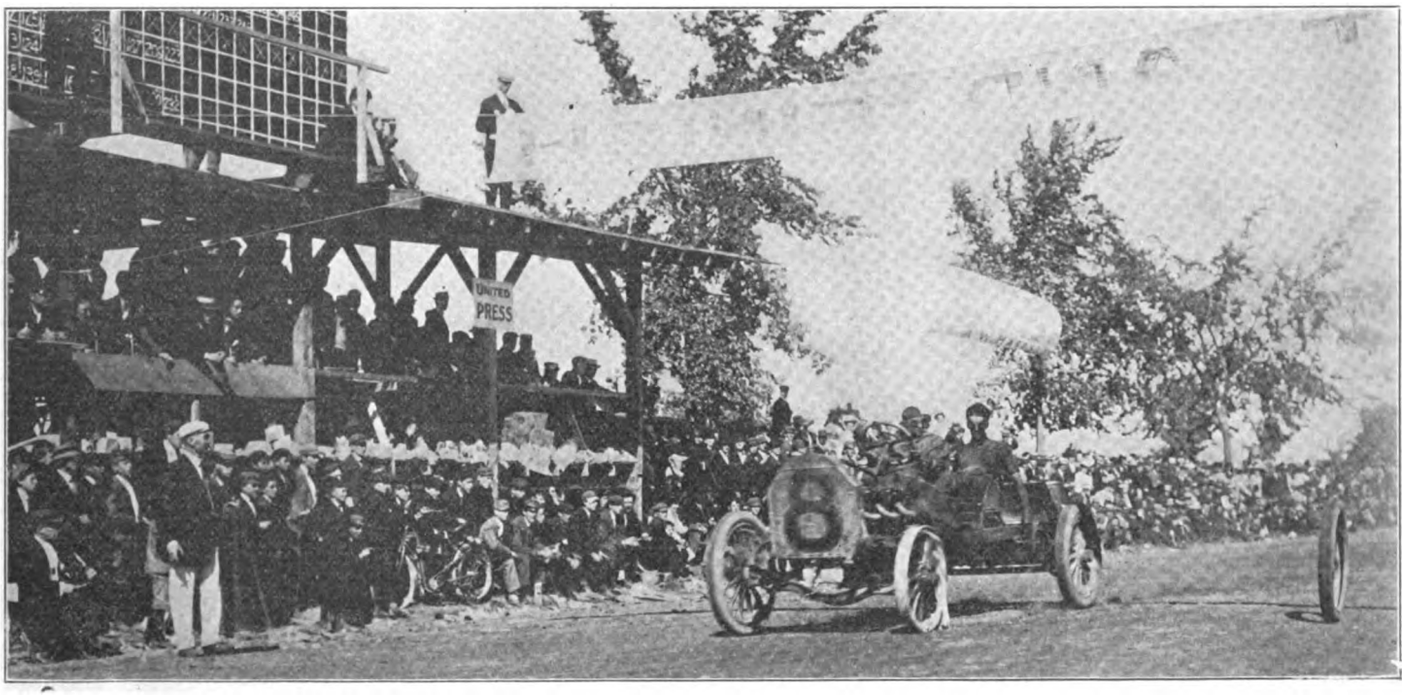
VIEW OF THE "DIP OF DEATH"

the large force of regular police under command of Superintendent Moffat.

The usual suppressed excitement was manifest at the start when the seven racing cars took their places a few minutes before 10 o'clock, the scheduled time for departure. There were to have been eight cars in line, but Al Poole, the driver of the other Isotta-Fraschini, had eliminated himself a few days before when he ran off the course, upset his car and broke his collarbone. The race started almost to the minute. Lescault, in the Simplex, was the first away, and then Robertson moved up to the line and awaited the count of 60 seconds. "Ten seconds" shouted the starter, then a pause and the last count: "Five, four, three, two, one, Go!" and Robertson was soon lost to view. Strang was third away and he got the biggest cheer of all—his boyish face drew sympathy from the feminine contingent. Burman followed Strang, and then Bourque, followed by Basle. The biggest car of all, the six-cylinder American Locomotive, with Grant at the wheel, was the last to start, and the slowest, but once under way it ate up ground amazingly.

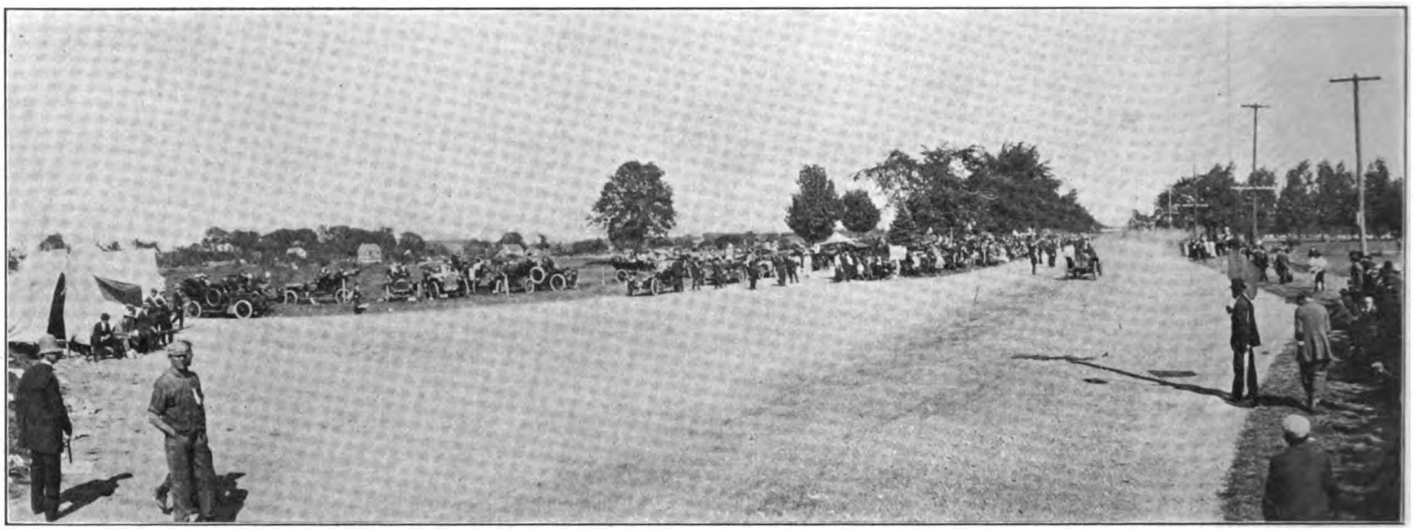
Less than three minutes after Grant got the word the crowd was on its feet as Lescault was announced as coming down the stretch, simultaneously with the news that Strang was overhauling Robertson, not a quarter of a mile apart. As Lescault rushed by the stands he raised his hand and got a cheer. Within 45 seconds Robertson, in the Fiat, was checked. Then came a bright red car emerging from the dust. It was Strang and his Italian car, and there was a rumbling as he shot by faster than either of his predecessors. Lescault's time for the first lap, 10.6 miles, was 12:21, while Robertson did it in 11:43. Strang in 11:42, and Burman, who followed, in 13:33. Basle, in one of the Knoxes, and Grant in the American Locomotive, both had tire trouble in the first round and were lapped by Strang, Robertson, Lescault, Burnam and Bourque.

Then the race began to present its changes and cars were shifting here and there. Strang did not attempt to do any fancy driving at the hairpin curve and so he did not have any trouble on account of tires. Others came limping around on three tires, Grant passing on the rim three times. There were not very many changes in the early rounds. Robertson and Lescault changed places, the former going into second place in the first round and dropping to last on the fourth, while Lescault poked



GRANT RACES WITH ONE OF HIS OWN TIRES

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LOOKING DOWN THE BOULEVARD TOWARD THE GRANDSTAND

into second place. Burnam drove consistently and worked up into third place, and before the race was one-third over he had shoved Lescault out of second place.

From the 8th to the 12th lap there was no change in positions, the order at the halfway point being Strang, Burman, Lescault, Bourque, Grant and Robertson, their respective times for the distance of 127 miles being 2:20:22, 2:26:53, 2:28:58, 3:07:48, 3:18:05 and 3:37:10. There had been no tidings of Basle after the 7th round, so it was presumed he had withdrawn.

There were six cars left in the race at the halfway mark and Ribertson then began some pretty driving, after having plenty of tire trouble. He worked up from last place to fourth, passing Grant. When Burnam came around in the Buick at the finish of the 13th lap the spectators noticed that it looked different from when it had started. The number on the radiator was missing and the name of the car appeared in its stead. E. Rand Hollander, representing the Fiat interests, protested to the referee that the car had been supplied with a new radiator and a new axle, outside help being employed for the change, and therefore it should be disqualified. Some time later the technical committee got hold of the car and after examining it officially disqualified it. The car kept running until the end of the 21st lap, but it was disqualified from the time the change was made in the 12th lap.

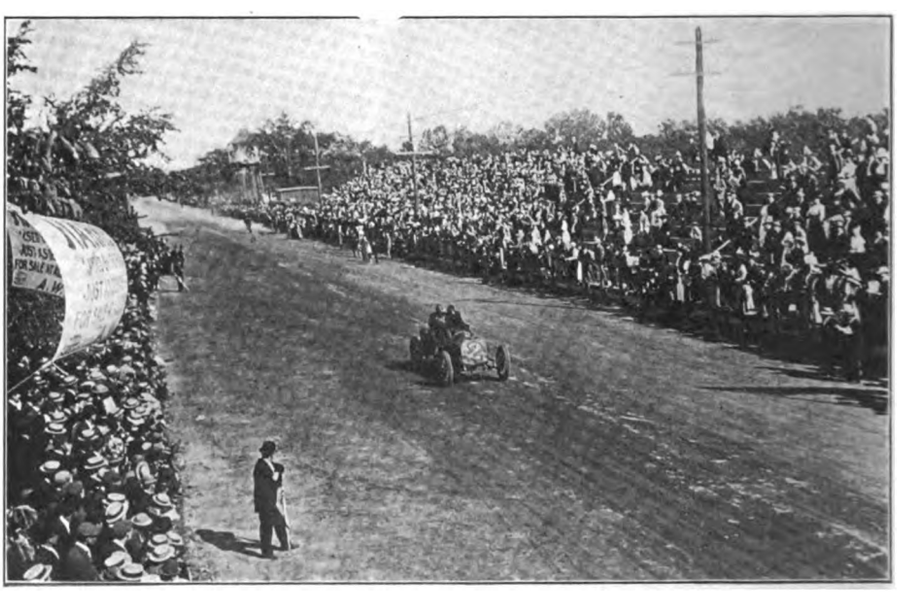
At 11:30 o'clock Strang had completed two-thirds of the distance and was then more than an hour ahead of the field. It was easily seen then that barring accidents he would win in a walk. Strang slackened his pace somewhat in the closing laps, but not to any great extent. His driving was most consistent throughout the time for each lap being as follows: 11:42, 11:43, 11:00, 12:00, 12:41, 10:53, 11:49, 11:40, 11:17, 11:50, 11:30, 12:17, 11:24, 12:26, 11:54, 11:52, 11:39, 11:39, 11:27, 11:22, 11:45, 11:43, 13:16, 11:45.

At 2:30 o'clock Strang was two laps ahead of the field with only three rounds to be covered. Bourque was then in second place with Grant third. While Grant was on his 15th lap he slipped the left front tire after an exciting brush with Bourque, whom he passed. The tire rolled off the rim and then raced alongside the car some distance as previously described and as shown in one of the accompanying pictures. Various officials tried to stop it, but failed, and a policeman was not quite brave enough to get in front. It finally hurdled over the back of a boy who was stooping and then fell on its side. Grant continued and replaced the missing tire at the next tire station. Bourque passed Grant and led for the next few laps, but his cylinders began to miss and Grant forged into second position and kept there until the finish.

It was not quite 3 o'clock when Strang came bowling down the stretch on his last lap. He had driven such a beautiful race that the grandstand crowds rose to their feet and cheered as he flashed past. Although Strang beat out the field by more than an hour and a half the finish between the remaining three was close. Bourque finished 19 minutes after Grant and Robertson less than five minutes after Bourque. Lescault retired after the 19th round, when cylinder trouble developed. He had made good time up to that point.

Strang's victory—the third big race in one year—puts him in a class by himself, the equal of any foreign driver. Nazzarro is the only other man who won three road races in one year.

The feature of Strang's successful driving has been his most excellent good fortune with tires. He did not stop once on account of tire trouble, in either the Savannah or Briarcliff races, and he had the same experience in the Lowell race. He used the same brand of tires in the three events—namely, Michelins.



VIEW OF THE CROWDS LINING THE COURSE

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DE PALMA DOES MILE IN 51 SECONDS

He Slashes World's Record at St. Paul and Then Defeats Christie—Four Real Contenders in 10 Miles Event.

The standing world's record of 52 seconds for a mile circular track was wiped from the slate on Saturday last, 5th inst., when Ralph De Palma, a Brooklyn young man, circled the fair grounds track at St. Paul, Minn., in 51 seconds flat, breaking by one even second the time made on the same track by Walter Christie a year ago. De Palma only took up automobile racing a few months ago, after having been kept out of all sports by a term of suspension meted out by the Federation of American Motorcyclists. It took him nearly four years to obtain reinstatement.

De Palma's great feat was accomplished at the joint meet of the St. Paul and Minneapolis automobile clubs, and, naturally, it was the big feature of the afternoon. Walter Christie, the former holder of the record, made two trials, one before and one after that of De Palma, but in neither instance did Christie equal his own figures set up a year ago.

Christie was the first to go for the record and when he finally appeared on the track the several thousand spectators yelled themselves hoarse. With his odd front drive racer Christie tore down the home stretch for the start. He shut off power to make the first turn, but picked up quickly on the back stretch and reached the half mile pole at 26½ seconds. The New Yorker again shut off for the turn into the stretch, but came down the last few hundred yards like a rocket. He missed his own record of 52 seconds by a fraction of a second, however.

And then came the big event of the day. De Palma drove up to the judges' stand smiling and confident and slowed to tell them not to take his time until he raised his hand. He went up the backstretch like a streak and as he flew down the homestretch his right arm shot in the air—the signal that he was ready to start. Opened wide, the Fiat Cyclone lived up to its name as it flashed over the tape and around the first turn in a cloud of dust. De Palma, who is a dare- devil of the first order, didn't slow a bit on the turn as Christie had done, but came out of the dust into the backstretch traveling faster than ever. The last turn was a repetition of the first, and the big car nosed its way into the final stretch and flew down it within two feet of the pole. De Palma made a beautiful turn and the crowd jumped to its feet in appreciation. In less time than it takes to tell, De Palma had crossed the tape and the timers consulted the watches. There was an expectant hush and then the announcement:

"Fifty-one seconds flat!"

Then Bedlam broke loose. By the time De Palma circled the track and drew up to the stand a crowd of enthusiasts had pushed through the guards and were waiting to congratulate the young driver for his splendid drive. De Palma took it calmly and coolly, but he was smiling, nevertheless. The car with which the record breaking feat was accomplished was equipped with Continental tires.

When it was announced that De Palma had broken the record Christie came up to the official stand and asked for another trial. He claimed that in the first trial his radiator had leaked. De Palma thought Christie would not have wanted another trial, if he had not broken the record, but the New Yorker was allowed to go out again. His driving did not improve, however, and the best he could do was 52¼ seconds.

The next event of importance was the match between Christie and De Palma, in three mile heats, best two in three. It was evident that Christie was nervous because after DePalma had lined up at the tape for the start, Christie said he would have to fix his car before he was ready. Just as the judges were about to award the match to De Palma by default Christie came up. De Palma drove in the same superb style that he displayed in the time trial, and he beat Christie to the first turn. De Palma ate up the distance amazingly and when he crossed the tape for the first mile his opponent was just coming into the stretch. In the next two miles Christie gained, but De Palma was never in danger of being overtaken, and did not push his car to the limit.

In the second heat the same tactics were followed, De Palma sticking to the pole while Christie swung wide on the turns. De Palma gained a substantial lead in the first half mile, which Christie reduced at the tape, but in the second mile the Brooklyn young man put a gap of daylight between himself and the New York driver which lead was increased in the last mile. De Palma finished in a cloud of dust in 3:01⅘ for the three miles.

In the five miles race for stock chassis several surprises developed. There were four starters and Stewart Elliott, in an American, set the pace for four miles, with Littlewood, in a Stearns, second. Elliott looked the winner when he had trouble and stopped, leaving Littlewood in the lead. Zengle, Pennsylvania, was third, and Stickney, Chalmers-Detroit, fourth, before Elliott withdrew, but the latter made a surprising gain and nosed Zengle out for second place.

The same four drivers later went in a 10 miles match, Elliott and Stickney giving the crowd its money's worth by alternating in the lead for several miles. Littlewood stopped in the second mile to make a slight adjustment, but reappeared and put up a cracking good race. The steady driving of Zengle in the Pennsylvania told, however, and slowly, but surely, he pulled up front and won the race, with Stickney, in the Chalmers-Detroit, second.

The five miles for stock chassis under $1,250, went to Fred Harn, driving a Mason car, in 6:13. Two motorcycle events created considerable interest. Fred S. Haas, on an Indian, won the 10 miles handicap in 13:49, and Lacy Crolius, Harley-Davidson, took the five miles open in 5:15. The summaries:

Ten miles handicap for motorcycles—Won by Fred Haas, Indian; second, Thomas Bird, Merkel; third, R. S. Porter, Indian. Time, 13:49.

Five miles open, for stock chassis—Won by J. C. Littlewood, Stearns; second, J. Stickney, Chalmers-Detroit; third, Leonard Zengle, Pennsylvania. Time, 7:51.

Five miles open, for stock chassis under $1,250—Won by Fred Harn, Mason; second, Charles Nyquist, Buick. Time, 6:13.

Ten miles match—Won by Leonard Zengle, Pennsylvania; second, Stickney, Chalmers-Detroit. Time, 12:40. Also ran—Elliott (American) and Littlewood (Stearns).

Five miles open for motorcycles—Won by Lacy Crolius (Harley-Davidson); second, C. W. Van Sickle (Indian). Time, 5:15.

Three miles match between Ralph De Palma, Fiat, and Walter Christie, Christie—First heat won by De Palma. Time, 3:14. Second heat and match won by De Palma. Time, 3:01⅘.

One mile time trials—Won by Ralph De Palma (Fiat). Time, 0:51 (world's record). Second, Walter Christie (Christie). Times, 0:51¼ and 0:51½.

"Century" Premier Completes Its Centuries.

On Tuesday, September 8, the Premier Century car, which started out June 1st to cover 100 miles for 100 days, completed its one hundredth journey with Joseph Moore at the wheel, and is now resting peacefully in Chicago. The car is said to be little the worse for the wear and tear and slamming it went through on its trip of more than 12,000 miles, and the performance is notable inasmuch as no parts were broken or repairs made necessary, which prevented it from doing its daily century, rain or shine. During the Glidden tour this car, which carried a load of newspaper correspondents each day, was given a most severe test, to say nothing of the other 10,000 miles that it plunged through all sorts of good, bad and worse roads, and once again the familiar phrase about American cars having "reached the high plane of perfection that renders them capable of withstanding any amount of hard usage within reason"—et cetera, is emplified.

It is the intention of President H. O. Smith, to have some western automobile club appoint a technical committee to inspect the car and make a report upon its condition when it is dissembled.

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*30x2½	12.70	3.20	15.90	....
28x3	14.05	3.50	17.55	$15.50
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*32x3	16.10	3.95	20.05	17.55
30x3½	22.20	5.05	27.25	24.15
32x3½	23.55	5.35	28.90	25.60
34x3½	25.70	5.70	31.40	27.70
36x3½	27.80	6.00	33.80	29.80
30x4	30.00	6.15	36.15	32.50
31x4	31.80	6.40	38.20	33.25
32x4	32.25	6.55	38.80	34.75
33x4	33.45	6.70	40.15	35.90
34x4	34.50	6.90	41.40	36.80
36x4	36.75	7.25	44.00	39.15
34x4½	43.75	8.50	52.25	46.70
36x4½	46.35	9.00	55.35	49.30
34x5	53.90	10.05	63.95	57.55
36x5	56.95	10.60	67.55	60.65

NOTE—Sizes marked * not made in Dunlop or Quick Detachable Clincher Tires.

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JUST a year ago this Company sent out the sample sets of its new tire. Drivers, dealers and all who tried them gave one verdict—"the best tire that has been produced to date." New equipment, new methods and tremendous volume of output have in time produced the logical result—a reduction in manufacturing cost. We are simply giving you the full benefit of our new equipment and methods, not only in the better quality of tire but in reduced cost.

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CLEVELAND, O.—326 Frankfort Ave., N. W.

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CAN'T CARRY AWAY HIS TROPHY

Harper's Prize for Eest Time at Wildwood Too Big to Move—Eight Events Contested and Honors Scattered.

Although he made the fastest time at the Wildwood, N. J., meet on Monday last, 7th inst., D. Walter Harper did not carry the prize he won to his Philadelphia home. Don't think that the prize was held up, or that Harper did not receive it. The reason was that the prize was not exactly such that Harper could tuck it in his vest pocket or carry under his arm. It was a large section of Wildwood real estate designated as a building lot.

This unusual prize was offered to the driver making the fastest time at the meet and Harper carried off the honors—but not the prize—when he sent his steam car over the measured mile stretch of boulevard in 47⅘ seconds. This was some seconds slower than the record made on the course at the Fourth of July meet.

The track was somewhat heavy in the early morning owing to the heavy rains on Sunday, but by rolling and scraping the force of workmen succeeded in getting it in shape before the time set for the races to start. That no accidents to spectators occurred was marvelous. The small handful of police was insufficient to handle the crowd, which surged time and again on the roadway, narrowing the course to a lane.

There were no spectacular features worth recording and the time trials failed to get within speaking distance of the record, either in the mile or the kilometer distances. One of the events that attracted the most interest was what was termed the "Presidential Handicap." This was won by Arthur Hammerstein, a son of the noted impressario. Among the other drivers at the meet were John Wanamaker, Jr., and Senator John J. Coyle, who finished first and second in one of the touring car events. Hammerstein was third in this event. The summaries:

Special for Matheson cars—Won by William Haupt; second, Frank Yerger; third, Louis Taubel. Time, 1:22.

Free-for-all—Won by D. Walter Harper, Stanley; second, Joseph W. Parkin, Jr., Parkin; third, William Sharp, Sharp-Arrow; fourth, Thomas Wilkinson, Packard; fifth, Frank Yerger, Studebaker; sixth, Arthur Hammerstein, Mercedes. Time, 0:55⅗.

Gasolene cars—Won by William Sharp, Sharp-Arrow; second, J. W. Parkin, Parkin; third, Frank Yerger, Studebaker; fourth, Arthur Hammerstein, Mercedes. Time, 1:04⅗.

Steam cars only—Won by Frank Dorrell, Stanley; second, H. Clayton; third, William Lipmann. Time, 1:25⅗.

Special event for gasolene cars—Won by John Wanamaker, Jr., Packard; second, Senator John J. Coyle, Pierce-Arrow; third, Arthur Hammerstein, Peerless. Time, 1:03⅗.

Mile time trials—Won by D. Walter Harper, Stanley; second, William Sharp, Sharp-Arrow; third, J. W. Parkin, Parkin; fourth, Thomas Wilkinson, Packard; fifth, Frank Yerger, Studebaker; sixth, Arthur Hammerstein, Mercedes. Times, 0:47⅗, 0:51⅕, 0:51⅗, 0:57⅗, 1:05⅗ and 1:06⅗.

Free-for all handicap—Won by Arthur Hammerstein, Mercedes (0:19); second, J. W. Parkin, Parkin (0:04); third, D. Walter Harper, Stanley (scratch). Time, 1:18.

Kilometre time trials—Won by D. Walter Harper, Stanley; second, J. W. Parkin, Parkin; third, Arthur Hammerstein, Mercedes; fourth, Frank Yerger, Studebaker. Times, 0:27, 0:30, 0:41 and 0:41⅕.

Poughkeepsie Programs a Race Meet.

Having recuperated to some extent from his recent automobile accident, in which he knocked down a telegraph pole, Fred J. Wagner, whom the city of Baltimore dubbed "America's greatest starter," will manage a race meet at Poughkeepsie, N. Y., on October 2. A sanction has been granted by the A. A. A. and a program has been mapped out, which is designed to give cars of all prices a chance to win. The entry fee for each event is $10.

The following is the card for the meet: Five miles; open to gasolene cars selling under $1,250. Five miles; open to gasolene stock cars, selling $2,001 t oand including $3,000. Five miles; open to gasolene stock chassis, selling $4,001 and over. Free for all, best two out of three heats; not more that two cars to compete in a heat. Open to gasolene stock chassis cars of 40-1 to 60 horsepower, inclusive. Five miles; Dutchess County handicap, open to gasolene stock cars. Ten miles; gasolene stock chassis cars, 40-1 to 60 horsepower, inclusive.

New Route for Kansas City Run.

Small flint stones which abound in the Flint hills between Winfield and Joplin, Kan., have frightened the Kansas City Motor Club's pathfinding party to such a degree that the proposed route to Oklahoma City, Okla., will be abandoned in part. It was found imperative to change the route when the Studebaker car, which is mapping the itinerary, encountered such a band of tire devils between Joplin and Wichita that Elliott Jones, the driver, and the passengers were well nigh exhausted from changing tubes. For leagues the road is naught but a cattle trail, filled with large and small flint rocks and they claim that 25 miles of going on it is enough to ruin any set of tires. Accordingly the pathfinders traced a new route on a map, running through the towns of Augusta, Eldorado, Eureka, Osawatomie and Paola, returning to Kansas City via Platte and Martin. This route, it is believed, will be a thoroughly possible one for the proposed endurance contest.

TRACY TRIES OUT MOTOR PARKWAY

First Trials on Completed Portions of the New Course—Quarter Mile Officially Timed at 10⅘ Seconds.

As a first attempt to discover the speed possibilities of the new Long Island Motor Parkway, over a portion of which the Vanderbilt Cup contest will be run, Joe Tracy, in the 1906 Vanderbilt cup Locomobile "tried it out" on Friday last and did some tall traveling. According to the watches of the official timers, C. J. Dieges and H. O. Von Schuckman, of the Timers' Club, Tracy covered a quarter mile in 10⅘ seconds, which is at a rate of nearly 90 miles an hour. On a three miles stretch of road, Tracy made four trials with the old car, which is still in healthy condition, but found it difficult to get up the right momentum and shut down again in such a short distance, particularly when he had to work up most of his speed on a curve.

The first half-mile trial was done in 23 seconds and the second in 24, which demonstrated clearly that the course was capable of permitting fast going.. The car was then sent whizzing over a quarter mile stretch, and the watches showed 11 seconds. Thereupon Tracy made a final effort and beat this mark by one-fifth of a second, some watches catching him at 10 seconds flat.

The builders of the Parkway promise that 11 miles of the road will be completed in time for the cup race; eight miles is now in condition, but in disjointed sections.

Nazzarro Captures the Florio Cup.

Felice Nazarro, driving a Fiat car, won the annual Florio cup race at Bologna, Italy, on Sunday last, 6th inst. Nazarro covered the course of 528 kilometers (327.6 miles) in 4 hours 25 minutes 21 seconds, his average speed being 74.271 miles per hour.

The race this year did not attract as representative a list of entries as the ones preceding it. There were six Italian and eleven French cars in the race and of this number six finished in the following order:

1, Nazzaro, Fiat, 4:25:21; 2, Irucco, De Dietrich, 4:34:07; 3, Cagno, Itala, 4:56:12; 4, Demogeot, Mors, 4:57:11; 5, Lancia, Fiat, 5:08:51; 6, Garcet, Bayard-Clement, 5:22:07.

Bar Harbor Bars Automobile Forever.

Bar Harbor, Me., is going to bar motor cars from entering its borders, permanently and for all time. The exile of the automobile was decisively voted upon at a meeting of the Village Improvement Association on Tuesday, September 8, and the latter agreed to sympathize and co-operate with the Land Owners' Association, which is making an effort to shut out motor cars from the entire island of Mt. Desert.

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WHY A. A. A.-A. C. A. "WARFARE"

Inside History of Personal Grievances and Personal Dislikes Responsible for "Sandbagging" of the A. A. A.— A. C. A.'s Untenable Position.

"To a limited extent, the so-called 'war' between the American Automobile Association and the misnamed Automobile Club of America, reminds me of the 'war' between the Brotherhood of Baseball Players and the established National Baseball League, which was waged so bitterly," remarked a New Yorker who is familiar with the automobile racing situation. "Men with itching palms and disgruntled newspaper reporters who were not wholly free from the itch, were at the bottom of the baseball warfare, just as they are at the bottom of the present automobile disturbance. With a very few notable exceptions, the New York baseball reporters and sporting editors took up the cudgels of the 'brotherhood' and misrepresented and generally 'sandbagged' the national league in a manner horrible to behold. The few reporters—I now can recall but one—who gave the league a square deal or who said a word in its favor practically were boycotted or ostracized by their former associates. The result of that long and selfish fight is a matter of history. The clubs in both organizations were brought to the verge of bankruptcy, the public became disgusted with the sport and remained away from the games, and peace was declared not a moment too soon. When the smoke cleared away only one organization remained—the national league. It still remains, while the 'strikers' or 'outlaws,' that is, the so-called brotherhood, is but an obscure memory.

"Something of the same sort occurred in the earlier days of the League of American Wheelmen, but at that time the reporter press agent was not so well developed as now, but the 'war' served to show how self-interest is behind practically all of these sore head movements. On the eve of the racing season, the L. A. W. declared to be professionals about every prominent amateur in America, and several from abroad. The howl that went up reached heaven. The race meet promoters and a few big clubs joined hands, formed an association, adopted racing rules and a badge with a diamond in it, and made a very loud noise generally. They ran several big 'outlaw' meets under their own sanction and rules and permitted the professionals to compete as amateurs. The L. A. W. went right on suspending the whole outfit and in less than two years it dried up and blew away, every one connected with it being glad to make peace with the League on any terms. They all then readily admitted that the racing men had been taking money 'on the side,' and that they formed this 'outlaw' association solely to save their pocketbooks, that is, their race meets, which were threatened with ruin.

"Within the last few months we've had another exhibition of the sort of thing on which such 'wars' are based. Two or three shot-putters or high-jumpers, who write sporting stuff for New York newspapers, took a dislike to the man selected to manage the Olympic team. They first fired their pellets at him and when they proved of no effect, they commenced to 'sandbag' the Amateur Athletic Union and its president. They tried to stir up strife between the big clubs, hinted at the formation of a rival for the A. A. U., and kept it up until it became so tiresome that no one but themselves read their writings. They did not succeed in having removed the man who incurred their dislike, whose chief offense apparently was that on a previous occasion he would not permit a much mixed crowd of athletes to do whatever they pleased.

"In the present automobile squabble, the underlying conditions are somewhat similar. The 'auto editors'—as the Motor World not inaptly styled the anti-A. A. A. element—are 'gunning' chiefly for one man, A. G. Batchelder, a member of the A. A. A. racing board, who has cut no conspicuous part in its affairs, but who, in a modest way, and a not discreditable way, has tried to help things along. But 'Batch' is in the newspaper business and while professional jealousy may have something to do with it, the 'boys' are 'against him' for one reason or another and though most of them shake his hand when they meet him, if he could be ousted they would toss 'Dunc' Curry's 'Fair Fame' in a horse blanket for very joy. Most of Batchelder's newspaper 'friends' are also anxious to oust 'Freddy' Elliott, the A. A. A. secretary. His is the only salaried job in the association and though they will deny it strenuously, it is beyond doubting that two or three of the lower priced 'auto editors' view the salary with covetous eyes. The Flattened Tire Club, as they call themselves, seems to think that they and not the A. A. A. clubs should have the naming of the A. A. A. officials. Within the past week or so, one of the 'boys' openly suggested one of his old 'college chums' and fellow Britishers for Elliott's job. They have no particular grievance against Elliott who has treated them decently, and who really is as harmless as a cooing dove and as light as a feather. About his worst offense is parting his hair in the middle and plastering it down on the sides. He also came from out of town and Flattened Tires seem to consider him an interloper, and if they can force out him and Batchelder they'll be as happy as clams at high tide. Elliott has made the mistake of trying to be everybody's friend and as a result he is nobody's griend. Funny thing about Batchelder's and Elliott's enemies, too! Four of the most strenuous ones are transplanted foreigners.

"Several of the 'boys' have personal grievances of their own. For instance, 'Senator' Morgan, who before he became an 'auto editor,' promoted some unusual professional bicycle races, lays at the A. A. A. door the failure of his efforts to bring paying crowds to the large hotels that employed him to run the Ormond speed carnival and the Bretton Woods 'hurrah.' The failure lost Morgan a bundle of percentage money, and his wound apparently never will heal. He grinds out anti-A. A. A. stuff by the ream and spins like a top in doing so. He has discovered more A. A. A. 'mare's nests' than any man alive, and has had considerable to do in the creation of the present disturbance. But even if his head isn't, Morgan's heart is big and in the right place, and though he had selfish ends to serve, it is to his credit that he never forgot the 'boys' when the midwinter junket to Florida was in preparation. Free transportation or free board, or both, for themselves and wives always was provided by Morgan—at the hotels' expense. It made them his friends for at least a part of his life and his fight for r-revenge has become partly theirs. Sam Butler, the secretary of the Automobile Club of America, always was of great use to Morgan's Florida enterprises and Sam always was first on the list of junketers. Last winter when Morgan was so sore at the A. A. A. because of its share in the promotion of the Savannah road race which he claimed would increase the frost on the Florida meet, he saw Butler, and Butler, who, because of the many sorts of large and small and important men with whom his job requires that he contend, long has subsided on cod liver oil and other oleaginous food, adroitly induced the Automobile Club to lend its name to the Florida fizzle. There's where the A. C. A. enters on the racing scene. Bob Morrell, who once was chairman of the A. A. A. racing board, also went to Florida for Morgan. His wad is large enough for him to pay his own way, and Robert, who frankly admits that he loves the limelight, was tickled to death to pose as referee. He has his grievance, too. He considers that the A. A. A. dropped him too unceremoniously. Although he won no medals as an A. A. A. chairman, his pride was hurt; and the same crowd that is now hounding Batchelder, without ever mentioning his name, were the same who a few years ago were saying that but for 'Batch's' help, Morrell would have been lost in the shuffle.

"Morgan is not the only 'auto editor' who has a personal grievance. There are several others who have tried to increase their incomes by dipping into the promotion of road races, track races, hill climbs, and automobile shows and who in doing so have run counter to the A. A. A. rules; in fact, there is no telling when scratching below the surface of such affairs will not disclose one or more of the 'boys' with fingers reaching for the plums in the pie. Tom Moore

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has proved mightily useful to them in making pies of the sort. It is to Tom's credit that though he will organize any sort of an 'association" or event, over night, for anyone who pays his price or whenever he sees a chance to share the spoils, he is not drawin a salary as an 'auto editor.' He's a free lance press agent, and as he knows how to 'take care of the boys,' they treat his projects accordingly. Tom is 'in' on the Automobile Club's press work for its anti-American road race at Savannah. He is openly at work for it and collects his money regularly; and if reports speak truly there are at least three 'auto editors,' who are well paid by their respective newspapers for serving up impartial news who also are on the club's pay roll for $25 per week each; not for 'sandbagging' the A. A. A., or for belittling or injuring the Vanderbilt cup race—perish such thoughts!—but for 'publicity work' in connection with the Savannah races. I don't say that these reports are true, but I do say that the writings of the three men in question make appear that they are earning the $25 per week even if they are not getting it.

"It is this sort of stuff of which the anti-A. A. A. newspaper campaign is made. If you attempt to discuss the subject with the average member of the Automobile Club, he'll throw up his hands and admit that he doesn't know what the rumpus is about. Talk to one of the little handful that is responsible for the present state of affairs and he becomes at once very frank and mysteriously suggestive. He will tell you that the club has no desire to control racing, and without cracking a smile will add that against its will it is being forced to spend $20,000 or $25,000 for the Savannah project. Asked if there is any clause in its compact with the European bodies that forces it to do so, he'll answer 'N-no; but we feel dutybound to do it.' Press him for a statement of the club's ideas and this 'insider' will weave a tale about how the club is willing to enter a federation of clubs for the control of racing, which federation shall govern but which shall not promote events. Then the conversation will follow about this trend, which is close to actual conversation:

"'Does not practically every national organization of whatever sort, conduct its own annual championships or big events akin thereto?'

"'It may be so; but I'm not sufficiently well posted to answer one way or the other.'

"'If such a federation were formed would not the A. C. A., in view of its foreign affiliations, still assert its right to be paramount in dealing with international affairs?'

"'Y-yes; I suppose that's so.'

"'Isn't the American Automobile Association just such a federation as that which you suggest?'

"'I suppose so.'

"'Then why did the Automobile Club withdraw from it?'

"'Oh! you don't know what we had to contend with.'

"'If you had any differences, why didn't you fight them out in the right way—inside the organization?'

"'We stood it as long as we could.'

"'Stood what?'

"At about this stage of the proceedings, the A. C. A. 'insider' commences to twiddle his thumbs and clear his throat, and wanders into a maze of generalities. One of the most specific things they appear to have 'stood' is Judge Hotchkiss, the president of the A. A. A. They'll tell you he is a politician seeking to use the A. A. A. to serve his political ambitions. Then they'll suggestively remark the fact that the A. A. A. is a corporation without capitalization. Ask them if incorporation is not a pretty good safeguard for the members of every organization, they'll admit it and qualify it with a statement that the A. A. A. is a corporation 'without property or personal responsibility.'

"'Is it usual for national organizations to possess much property?'

"'N-no.'

"'Is the Automobile Club of America a corporation?'

"'Yes.'

"It was incorporated to eliminate the element of personal responsibility, wasn't it?'

"'P-possibly.'

"'Don't dodge! It was incorporated for that very purpose and no other—wasn't it?'

"'Say! Let's talk about something else.'

"As a matter of cold, hardpan truth, the Automobile Club of America has not a legitimate support to lean on and if it were not for the fact that most of the New York 'auto editors' have their knives out for Batchelder and Elliott and to whet them are attacking and misrepresenting the A. A. A. and magnifying every trifling weakness, New York's big club would be displayed in its true light—the sorriest and pettiest and most spiteful thing that ever assumed the guise of an automobile organization and one that merits not an iota of support or sympathy. Its injecting itself into the racing situation by promoting the Savannah race, 'in order to uphold its foreign affiliations' was a mere afterthought, and is a subterfuge to 'save its face' that is so transparent that few who can put two and two together should be deceived for more than two consecutive minutes. Its 'foreign affiliations' had nothing to do with its withdrawal from and its present attitude toward the A. A. A. It withdrew, leaving behind what it called its 'best wishes,' solely and only because it could no longer dominate the New York State Association of the A. A. A. Since the day of The Wonderful Shattuck, who in the club, in the State association, and in everything else, either ruled or ruined, rule or ruin has been the policy of the club. In the A. A. A. this policy had opportunity for full swing through the A. C. A. men who served as presidents or grand moguls of the national organization. They had things pretty much their own way or were handled like spoiled kids, until Judge Hotchkiss, of the Buffalo Club, because president and Oliver Quayle became head of the State association. These men, and some others from up-State, had minds of their own, and the A. C. A. thunderbolts didn't scare them a little bit; they caught the bolts with bare hands. For three or four years the club has had in pickle a profound and voluminous law which Dear Lawyer Niles prepared at great expense of time and grey matter and which has the unstinted approval of Shattuck Scarritt, Dave Morris and other 'lords' of the A. C. A. It is a 'bird' of a law for rich men. It provides for extortionate license fees, revocation of licenses, tremendous fines and other things. Fees of $30 or $40 a year, or a fine of $500 or $1,000 would be mere nothings to the Shattucks, Morrises, Hoyts and Garys, who can light fifty-cent cigars with five dollar bills, if they choose to do so, and who have a stable of cars and drivers upon which to call, in case the license of any one of them should be revoked; but for the car owner who puffs fifteen centers and is his own chauffeur, the Niles law has quite another complexion. In return for the high fees and fines the law provides certain things dear to the A. C. A. heart—things that will not make it so easy for the police to interfere with the pleasure of drivers in New York City.

"For at least three years, the club has been trying to ram this law down the State association's throat, whether the rest of the State liked it or not. The up-State clubs were willing to offer a compromise and did have introduced a compromise bill. As it did not suit Shattuck and some of the other A. C. A. domineers, Shattuck butted into the legislature and queered everything. Some people very properly expressed their opinions of such proceedings, whereat the A. C. A., in substance, decided that the State association, the rest of the State, and the A. A. A. might go to hell for all it cared; it was mad and henceforth would play in its own backyard.

"Then along came 'Senator' Morgan with his Florida grievance. He uncovered it so that Sam Butler could get a good look at it, and Sam, he takes another dose of oil and spills a bit so that the way is greased for the A. C. A.'s entry into the racing game. But despite Sam's best efforts and the A. C. A. name, the Florida carnival proved a first class fizzle, and Morgan's wounded pocketbook bled worse than ever. Meanwhile Tom Moore and an 'auto editor' were carrying around an 'association' in their hats. They pulled off a profitable little hill climb and becoming more ambitious and seeing millions in a road race on the Vanderbilt cup course, they tried to get the course, and failed; and thus were two more unselfish men made sore. Vanderbilt and the A. A. A. were blamed for

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the failure. Nothing daunted, when Moore learned that a wealthy inn keeper and real estate man in Westchester county had lots of ground for sale and which needed booming, he sought him out and the Briarcliff road race was the medium used to boom it.

"Afterwards Moore convinced several of the New York dealers and importers who entered cars in that race that they were foolish to pay big entry fees, etc., when instead they could run races and divide the profits, or make other race promoters 'see' them in order to get entries. By 'them,' I mean Moore. Tom 'sees' them first and promises or guarantees entries, and if Tom isn't thereafter employed as manager or press agent, or both, it isn't Tom's fault. The so-called Motor Racing Association—which, by the way, is now a dreadful corporation—consists of these dealers and importers. As a corporation it can be 'seen' much more respectably. Moore is behind the scenes and the role of 'outlaw,' which the association is playing, has served good advertising purposes, although the hired men who will do the driving probably will not awaken to the fact until the hot water reaches their eyes.

"All the while, the 'auto editors' were slyly swinging their battle axes in the direction of Batchelder and Elliott and when the Automobile Club suddenly awakened to its marvelous respect for European manufacturers and its 'foreign affiliations,' the 'boys' executed a war dance. It gave them their long sought opportunity to swing their axes in the open and the 'morgue,' as was their wont to describe the club, became paradise. The A. C. A. is now a paragon of virtue and the A. A. A. a monster shorn of all disguise. The position of the Savannah Automobile Club affords another interesting phase of the itching palm situation. Last Fall, it was glad to have the support of the A. A. A. in promoting its road race. Later it wanted the Vanderbilt cup race, and when it couldn't get it, it turned tail like a yaller dorg and asked the Automobile Club of America to tie its tin can to its tail. It is a pretty exhibition of sportsmanship for revenue only.

"The whole business is sickening, and it is time the whole truth were told. The telling may violate the ethics of the reportorial profession, but the fashion in which the 'auto editors' and spacefillers are 'harpooning' and injuring a national organization which is seeking to do good, chiefly because some of their financial schemes have been hurt, and because of their aversion to one of their number who happens to be within the A. A. A., is a disgrace to the newspaper profession. Some of them may stand on their hind legs and say it isn't so, but you can take it from me that it is true and that they know it is true. I don't know much about methods that prevail in big newspaper offices, but it certainly does seem odd that reporters should be given such free rein in order to 'even up' personal grudges."

VANDERBILT CUP RACE ASSURED

Positive Announcement Made by the Commission—Great Series of Sweepstakes to Supersede Elimination Trials.

Wm. K. Vanderbilt, Jr., arrived in New York from Europe on Tuesday, September 8. The following day he attended a meeting of the Vanderbilt Cup Commission held at the headquarters of the American Automobile Association. Jefferson De Mont Thompson presided, and it was announced that the Vanderbilt cup race will positively be run on October 24, over the completed section of the Long Island Motor Parkway and the rest of the course, as already mapped out.

A. R. Pardington, manager of the Motor Parkway, reported that the construction of the Parkway is up to schedule time and the new cement highway would be completed in every detail in plenty of time for practice work.

Several more entries were pledged and Mr. Thompson stated that the entrance fee of $1,000 would hold good for the entry of one, two or three cars; the entrance fee, originally, was $1,000 for each car, but, under the new arrangement, each manufacturer will have the privilege of putting in not more than three cars for $1,000. The entries will close on October 1st, without forfeit.

Those who attended the meeting were William K. Vanderbilt, Jr., M. J. Budlong, Alfred Reeves, F. G. Webb, A. R. Pardington, A. G. Batchelder, Robert Graves and F. H. Elliott.

After the meeting it also was made known that instead of holding an eliminating race on October 10th, the cup commission will inaugurate the Motor Parkway on that date with an inspiring program. The inaugural event will be styled "The Motor Parkway Sweepstakes," an event which will include cars of every class selling from 1,000 up.

They will all start together at 9 o'clock on the morning of October 10th around the Vanderbilt Cup Circuit of 25 miles. The larger cars will go the entire distance, ten laps (250 miles) and the smaller ones will go from four to eight laps according to their selling price.

It is believed that owing to the demand for a race between the 1909 models of various classes and makes the entry list will run up to more than 75 cars for this new event. The very novelty of the thing is attractive to the manufacturers who wish to display to the general public the qualities of their 1909 models.

The Cup Commission has offered the manufacturer more liberal conditions than have ever been given in a stock model event. The entrants must furnish evidence that the machine is of a type to be produced in quantities during 1908, but touring cars will not be required to carry touring bodies or passengers. There is no restriction about mufflers except that they must not turn towards the ground and machines can be geared for racing purposes. Exhaust mufflers may be removed if desired together with all mud guards and other unnecessary equipment for a racing machine.

The entry blanks for the Motor Parkway Sweepstakes will be out this week. The preliminary announcement of the various classes of events, in which five thousand dollars in prizes are offered, is as follows:

Class No. 1. Motor Parkway Sweepstakes—For cars selling above $4,000. Entry fee $150 for each car. Cash or plate prize to the winner of $1,000. Distance, 10 laps of the circuit.

Class No. 2. Meadow Brook Sweepstakes—For cars selling over $3,000 to $4,000. Entry fee $125 for each car. Distance 10 laps of the circuit. Cash or plate prize of $1,000 to the winner.

Class No. 3. Garden City Sweepstakes.—For cars selling from $2,001 to $3,000. Entry fee $100 for each car. Distance 8 laps of the cup circuit. Cash or plate prize of $1,000 to the winner.

Class No. 4. Jericho Sweepstakes—For cars from $1,001 to $2,000. Entry fee $75 for each car. Distance 6 laps of the Cup circuit. Cash or plate prize of $1,000 to the winner.

Class No. 5. Nassau Sweepstakes.—For cars selling for $1,000 or under. Entry fee of $50 for each car. Distance 4 laps of the cup course. Cash or plate prize of $1,000 to the winner.

Motoring Furnishes New Surgical Term.

Among the new names added to the nomenclature of human afflictions by Dr. Thomas Oliver in his recently published book, Diseases of Occupations," the motor car is responsible for at least one. It is described as "chauffeur's fracture" and is the unhappy result of cranking with the spark too far advanced. Oliver is professor of physiology in Durham University, England, and his exhaustive treatise on the special dangers attending each different occupation gives considerable explanation of the dangers to the wrist and forearm attending the back kick of an automobile motor.

Ten Cents a Mile Toll.

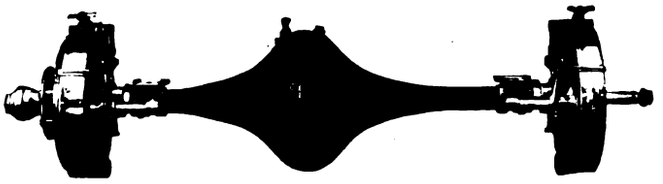
Motorists desiring to tour through Montgomery, Pa., may cheer up, for the company which controls the turnpike through Upper Dublin township has doubled the toll rates and now charges automobilists ten cents to drive a distance of one mile on their road. The president of the turnpike company declares that every motor car passing over the one-mile stretch of road on what is known as the Butler Drive, does eight cents worth of damage to the surface of the road.

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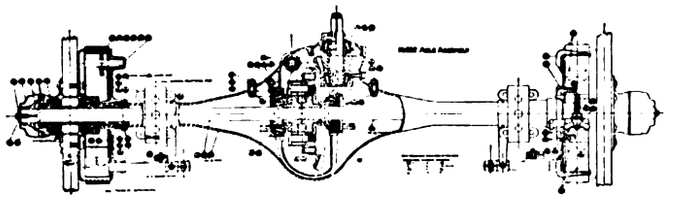
NEW "ONE-PIECE" LIVE REAR AXLE

Advanced Ideas Incorporated in Latest Timken Production—Special Features of Construction and Their Effects.

Presenting from the rear a view akin to the smoothness of a watermelon and unmarked by crinkle, corrugation, crevice, depression or angle clear out to the two ends, the new pressed steel rear axle which is being prepared for the market by the Timken Roller Bearing Axle Co., of Canton, O., is not only a conspicuous example of the "single-piece" live rear axle construction which has latterly become the ideal of many designers, but incorporates a torque rod mounting which is so advanced that only the Pope-Hartford and a single foreign car have been known to have anything like it in preparation for the coming season. Everybody knows that "single-piece" rear axles are not such in actual fact, and that in one sense the use of the words is a great exaggeration, but in the sense that a single piece takes the place of a great number of pieces and parts bound together by bolts and truss rods in forming the rear axle and gear housing the term "single-piece" has its justification.



REAR VIEW OF REAR AXLE, SHOWING ABSENCE OF PROTRUDING PARTS



PLAN VIEW OF REAR AXLE, GEAR CARRIER, BRAKES AND WHEELS

An objection offered against axles of the built-up type is that they require trussing and after the whole paraphernalia of plates and rods and bolts has been put together one part will exert a leverage strain against another when shock is imposed, that will make the effects much harder than they should be, and further, with the outside truss work the amount of vibration and jar is considerably augmented. The "one-piece" Timken axle is a pressed steel form, made of special basic open hearth steel of high static resistance, shaped to give better than truss resistance to load and thrust and to eliminate the vibration common to cast or forged axles of the built-up type. As shown by the illustrations, advantage is taken of the great strength in globular and tubular forms, and resistance is distributed proportionately to points of greater stress by graduating the thickness of the metal.

From the hubs inward as the thickness of the metal decreases the circumference of the tube increases and finally merges into the globe of the central case by a graduated flare, thus avoiding sudden angles or changes of direction, which are said ordinarily to add leverage and interrupt shocks and stresses at the points least like-smooth without angles, protruding parts, supports or braces. As at present designed ly of capable resistance. The new construction makes the entire load bearing and gear encasing member a single unit, clear and the axle is suitable for cars weighing up to 3,000 pounds when empty and not exceeding 45 horsepower. Among its other special features are a torque rod mounting hinged through a long vertical bearing to allow for side to side movement of the rear axle in relation to the body. The differential gear carrier in the housing carries the gear on Timken roller bearings at the two ends and the pinion of the power shaft is also supported on a double set of Timken bearings.



FRONT VIEW OF REAR AXLE, SHOWING GEAR CARRIER, SPRING BASES AND BRAKES



ONE-PIECE PRESSED STEEL REAR AXLE

FINDING LIMIT OF LOAD CAPACITY

Exacting Tests with Gyroscope on Hill and Level Yield Interesting Results—Big Effect of Upgrade Travel.

Exactly what is the utmost carrying capacity of a car—and by "carrying capacity" is meant capacity for human freight—often becomes a moot point when the subject is up for discussion. Few people are apt to agree or to guess right. It was to settle a question of the sort that a number of experiments in carrying capacity were tried one day last week by representatives of the Gyroscope company, on the 10 per cent. Fort George hill, New York, the results being distinctly interesting. A 16 horsepower stock Gyroscope runabout was started with one, two, three, four and five adults aboard, and each time the car had no difficulty in climbing the hill without recourse to the low speed gear. Little difference was shown in the manner in which the climb was negotiated, whether two or five people were perched upon it. Six persons, however, caused it to make the ascent with some difficulty and seven made it go very slowly. With eight adults the Gyroscope balked, however. This was not surprising as the total weight of the passengers was over 1,300 pounds. On a level road, the car sustained 20 miles an hour without difficulty with ten people hanging to it, and it was able to run, though slowly with twelve. This was the limit of the experiments, as it was feared that more weight would cause the frame to sag. Besides there was no more room for passengers to attach themselves to the car.

"The A B C of Electricity." Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

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MENTAL MEASUREMENT OF SPEED

Its Difficulties in Connection with the Many Phenomena of Motoring—The Conscious Recognition of Safe Limits.

Contending that few people may ever hope to judge their own driving speed accurately and that errors in calculating the speed are but the natural results of the fixed mental habits of associating noise, wind and rapidly changing visual impressions with rapidity of movement, A. J. McKinney, a writer in the London Autocar explains some of the "many phenomena" that take place in motoring. Incidentally he drags up the one-time raging question "Do motors run better at night?" only to answer it in the negative and to explain how the affirmatives have probably been led into their belief. He says:

"A story is told of two schoolboys who were once taken for a walk in the country by a wise schoolmaster. Upon their return he asked them what they had seen. The first replied that it had been very dull, and for his part he preferred something more exciting. But the other, who was observant and intelligent, contradicted this, saying that so many things had struck him that he could go on forever. Questions as to how certain insects could move about in water, why others when settling upon a blossom deposited a particular substance on them, the system of warning others of their species upon the approach of a stranger, seen in some birds, etc., etc., led him to learn something of surface tension, fertilization, and of the reasons for the survival of the fittest. The story is an illustration of what can be seen every day in the numerous motorists who skim about the public roads.

"Though to outward appearance we are gifted alike in having the usual number of senses, it does not take long to notice how differently people use them. Traveling in a car is delightful with some companions, for they see a remarkable number of phenomena of which others are quite oblivious. Their chain of deductive reasoning, too, is highly interesting to one of an analytic mind, and can turn what otherwise would be a dreary and uninteresting journey into one which gives endless food for reflection. And what deeper joy can be found than that of probing Nature's storehouse for the miracles and secrets which she will not reveal except to the earnest seeker after information? Psychology, for instance, is entrancing at times, but it has drawbacks which may eventually spoil the harmony of a trip, while the discussion of problems social and economical does not always, owing to the lack of piquancy, appeal to motorists.

"When one takes an intelligent interest in the rapidly changing and varying phenomena to be seen on all sides when motoring, nothing—except perhaps aerial navigation—can be imagined more delightful. What problems as to the intimate relations and reflex actions of ignition, carburation, humidity of the atmosphere, effect of elevation and surroundings, etc., etc., arise in the mind, and, as we investigate them, an endless vista of side issues and queries opens up beyond, which makes us despair of ever passing the fringe of the enormous volume of Demonstrable Truth that lies untouched before us. Every thinking man and woman has over and over again wondered dimly why such and such a thing happens, and, like Captain Kettle, made a note of it for future enquiry. But, alas! we live at such a rapid rate nowadays that very few of us have either the knowledge of how to set about such research, or, if thus favored by the gods, the leisure for the purpose.

"That many of the ordinary every-day events puzzle or mislead us, even when we have a satisfactory working hypothesis to go upon, is undoubted, and must be put down to natural defects in ourselves. Look for instance, at the strong tendency to self-deception we experience through our senses. Upon this depend hallucinations—or, better still, illusions—from which no one is free, even when he knows well that an experiment is taking place. One need only mention conjuring as an instance of the manner in which people can be hoodwinked through the sense of sight, which, indeed, is the key to many things which cause us to ask "the reason why" on an ordinary motor trip.

"Of all the problems that face us in the car that of speed is the chief. And here I am treading on thorny ground, having a vivid recollection of voluminous and heated correspondence in the automobile press on this very point. So interesting and contradictory have been other people's experiences in regard to estimating their pace that a slight sketch of some of the conditions that influence one's judgment may not be out of place. In my own case, after having tried hard for a couple of years to acquire the faculty of judging various speeds accurately, I find myself as much at sea as ever when calculating speeds, as the kind of car, difference of surroundings, alternation of light and shade, one's mental condition, and frequent changes of speeds are powerful factors in the question. So pronounced indeed are they, that when traveling at really high speeds it is impossible as a rule under these conditions to gauge one's speed within ten miles an hour. . . . . Let anyone go through a week's test with a reliable speedometer that registers correctly, covering it up while the speed or conditions vary, and giving an audible guess before looking to see if he is correct. In particular, if this is done after dark, an easy solution will be found to the query, 'Does a car run better at night?'

"Conditions were referred to just now as having a decided effect upon one's estimate of speed. Among the most important are noise, direction of air currents, character of contiguous objects, difference in intensity of light, etc.

"Under the term 'noise,' we find quite a number of contributing factors, including those due to external causes, such as road surface, other traffic, and the reflecting properties of walls and the like; as well as the internal, i. e., the type and state of the car itself. And all of these are modified by the subjective factor or personal state. To form a fair opinion the observer's mental or impressionable state must, of course, remain in statu quo, otherwise an endless series of complications set in which make any satisfactory analysis out of the question. Speaking generally, a 'noisy' road will make a car's speed appear greater than it really is, but this again is modified by the presence of other vehicles. And a still further qualification is found in the nature of the rest of the traffic, a large number of vehicles close together having an effect different from that of a few passing at intervals.

"As a rule an experimenter will find that if another vehicle travels alongside him on a rough road his speed will seem greater than before, while, curiously enough, the same thing is found when other cars meet him. In the former case an echo is caused, while in the latter the mind carries with it, for a time at any rate, the impression produced by the combined rates of speed. The form of neighboring objects, again, is influential, buildings and walls close alongside intensifying the hum of the mechanism and beat of the exhaust, leading one instinctively to overrate the speed. Very few people, indeed, are aware how easily sound is reflected, even the small posts used in wire fences throwing back a perceptible 'zip' as one passes. And directly one gets away from houses and walls into the open country the speed seems to fall off because the echoes vanish. This mental impression is no doubt due to the fact that the human mind, having no experience of speed in terrestrial objects apart from sounds, cannot dissociate the two, reasoning that the louder the noise the higher the speed.

"Another factor that considerably interferes with one's mental appreciation of pace is the influence of air currents, a strong breeze in the face often intensifying speed considerably. Here again it is a question of environment, the general experience that motion causes air resistance or wind leading the mind to infer, vice versa, that wind means usually motion. Now when we are traveling in a speedy motor car we have no faculty for discriminating between air velocity due directly to our own motion—i. e., as a breeze in the ordinary sense of the term. For instance, let us suppose the wind is blowing at fifteen miles an hour, and the car is moving at thirty-five. The effect on its occupants is then the same as

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hour on a calm day. Now, even when one knows that the day is windy, the mind cannot determine how much of the car's apparent speed is due to the natural breeze, and our perceptions are therefore at a loss. Or again, imagine the wind blowing behind. At thirty miles an hour the passengers merely feel a gentle zephyr in their faces, and will think they are merely drifting along.

"I might say more as to the effect on the speed estimating powers of the mind of running through variegated country—i. e., passing through valleys and woods or into patches of gloom and bright sunshine in rapid succession—but it is hardly necessary now. But one thing that is distinctly worth noticing is the peculiar effect on our ideas of speed due to darkness. That we overestimate speed at night—quite apart from any other cause—is to my mind indisputable, and I do not mind challenging anyone to prove if he can that I am wrong.

"But two things that will bear out my contention are the speedometer and the time taken over a well known journey. The first named will invariably be found to show a surprisingly low figure, while the latter is longer than usual. As to the reason for this deception opinions vary. In my opinion it depends partly on the fact of our visual powers being restricted, since we mentally judge pace by the time taken to arrive at an object after first sighting it. In other words, we do not allow sufficiently for the very much shorter distance covered under these conditions in a specified interval.

"Rapid variations of pace, too, also have great influence on our speed-judging powers, particularly if experienced for a quarter of an hour or so, making it impossible to estimate correctly. For instance, recently, when taking out a nervous lady, I traveled at something like ten miles an hour for twenty miles or so, after which I quickened the pace. After going at what seemed to me a hazardous speed, I could hardly believe my eyes, for on looking at the speedometer it only registered eighteen miles an hour! Again, on another occasion, after a prolonged run at high speed, I slowed down, as I thought, to a jog-trot speed, and yet it turned out to be just under thirty! The truth of this is shown by the experience of numerous thoughtful motorists, who will bear out my contention that to estimate one's speed accurately when in a car is well nigh impossible.

"On the whole one can sum up the question by saying that the general tendency is to under-estimate low speeds and to overestimate high ones. At the same time no experienced motorist will make a mistake as to danger. He may not be able to estimate his speed correctly in miles per hour, but he knows instantly if he is going too fast for any given environment. This, after all, is very much more important than the ability to state accurately whether he is running at twenty miles an hour or at some slightly higher or lower speed."

PLANS OCEAN-SKIRTING BOULEVARD

Governor Fort Advocates a State Road From Atlantic Highlands to Cape May —Estimates Cost at $400,000.

At a dinner given at West End, Long Branch, N. J., last Thursday evening, at which many prominent persons were present, Governor John Franklin Fort presented in detail, a plan for the construction of a boulevard, 120 miles in length, to extend along the Jersey coast and connect all of the seaside resorts between Atlantic Highlands and Cape May, with the northern end to join the Parkway roads to New York and the southern extremity with Philadelphia.

Whether or not some of the State's higher authorities have consciences that hurt, in view of the way motorists have been mulcted by pickpocket laws, is not stated, but the newly proposed boulevard will cost approximately $400.000, a fair chunk of what has been lifted from motoring purses during the last three years. Jefferson Seligman was empowered by the property owners present to appoint a committee of 15, which will include the senators and assemblymen of Monmouth, Ocean, Atlantic and Cape May counties, through which the road will pass, to prepare legislation with a view to the construction of the boulevard by the State.

In his speech, Governor Fort said: "In 50 years our children will see practically an unbroken city along this coast and living in it two and one-half millions of people during at least three months of the year. All the New Jersey coast towns should be linked together by a single road system, and all the inland towns of the State, from county seat to county seat, from Newton in Sussex Sussex to Cape May Court House in Cape May, should be equally united together by a continuous highway. These two highways, the one on the coast and the inland one, should, in my view, be under State supervision and built, where not now built, by State expense, and hereafter maintained by the State without cost to the local municipalities. To insure this being done the municipal governments would no doubt voluntarily transfer the control of such a road over to the State. They probably would gladly do this if they were relieved from local taxation as a result.

"First and foremost, it must be conceded that this must be a State road. It is more than a local enterprise. It must be maintained as a unit, and it must be maintained evenly in all its length. This the State only can do.

"What should be done in the immediate present is to get the control by the State of such roads as now exist and can be utilized, repair them and place them in superb condition. Then, macadam and gravel them to the full width of the road from curb to curb. If the road begins at the Highlands, which the people of that borough very much desire, it can be reached from Matawan and Keyport, and it will need but little construction over the Highlands to Seabright. Beginning at Seabright and running to Ocean Grove there is at the present time practically a complete roadway, much of it on the ocean front, the only break being at Deal Lake, where a bridge with about 45 feet span would need to be constructed."

Here the Governor outlined in detail the balance of the route, which is designed to pass through Fletcher Lake, Shark River, the State camp at Sea Girt, Manasquan, Bay Head, across Barnegat Bay by bridge to Toms River, Cedar Creek, Tuckerton, and thence to Atlantic City, and then he continued:

"The approximate distance which would be covered by this proposed highway is about 120 miles. The cost of this enterprise is not prohibitive. It is believed that the entire work, including all necessary bridging, with the widening where necessary of existing roads and the completion of the roadbed from curb to curb, can be done inside of an expenditure of $400,000.

"The figures which I am given by the Automobile Department of the State show that the revenue from licenses and fees under our present automobile law will not be less than $175,000 per year. By utilizing a portion of this, under legislative authority, if it can be obtained, we shall have the revenue to repair these great highways through the State."

Cold Beer for Hot Motor.

"'If a broncho has bronchitis in his broncho-bronchial tube,
Will an auto guzzle beer?' asked the hayseed, country rube—"

—Sonnets of Peri Pundar.

And the answer comes decisively—it will. First it was a Goldfield mining man who landed in New York City the other day who told how he saved a party from being stranded in a Nevada desert 40 miles from nowhere and half as far back, by pouring a case of beer in the cooler when the water supply became exhausted. Now comes the authentic information from Salt Lake City that six quarts of the amber brew saved a party a walk of six miles alsb over blistering sand. The car was of the air-cooled type, but the Utah atmosphere was so torrid that the engine became overheated and it was a long walk to the nearest water supply. One of the party remembered the case of beer in the tonneau—and there's the solution. It reasonably may be expected that these incidents will present suggestions in Maine, Georgia and other prohibition States. It could be sold in five gallon cans as "automobile engine cooling fluid, and the prohibitory laws might remain inviolate.

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AUTOMOBILE RESERVE FOR ARMY

German Military Authorities Perfecting Their Plan of Subsidizing Cars—Outline of the Scheme.

The national importance of automobiles in time of war is now receiving very careful attention from the German military authorities, and already they have taken a bold step in announcing a subsidy scheme which will enable them to secure the services of a large number of cars in any national emergency, says The Field. They favor cars of not less than 30 horsepower, and for each of these will pay a purchase subsidy of $1,000, and maintenance subsidy at the rate of $250 for five years. From this it will be seen that the private motorist or the manufacturer who accepts the subsidy arrangement, and whose car passes the military examination, will receive a grant of $250 per annum for a term of five years, and if at any time during that period the Government desires to purchase the car he will receive for it a sum of $1,000.

The maximum amount to be made out of this arrangement is probably $2,250, and in many cases this might not be an adequate return to the owner. A scale is being drawn up so as to equalize matters when the horsepower of the cars is higher than 30 horsepower, and doubtless little difficulty will be encountered in making the arrangement workable on an extensive basis. Moreover, it will not be altogether regarded as a financial deal by the motorists concerned, as the success of the scheme has national importance. The German authorities realize the utility of the motor car in modern warfare, and with a large number of reliable and suitable vehicles at their command they would have a most efficient means of light transport.

Speed will be a great factor in the next great European war, and though motor cars cannot be altogether used in the place of ordinary military transports, they can on various occasions supplement them with much advantage. Perhaps the main use will be for enabling officers to get about quickly, and as modern battles are fought over very extended areas a swift vehicle like the motor car is essential.

With, say, a thousand motor cars at the Government's disposal, an attempt, too, might be made to use them in moving comparatively small forces of men quickly from point to point in an emergency. If a special body were designed which enabled ten soldiers to be taken on a 30 horsepower car, the thousand cars could transport a body of ten thousand men with a speed and directness impossible by any other means. Now, the rapid movement of such a force might mean all the difference between success and failure in many an encounter, and as the cars might be able to accomplish the journey twice within the period, during which the men could be usefully employed at a certain point, it would mean that possibly 20,000 men could be moved to the place with celerity.

The question has importance also from the difficulty most armies now find in getting an adequate supply of horses. It is stupid, of course, to argue that the motor car can entirely displace the horse in warfare, but it will enable a less number to be used, and will permit the horse to be specialized in few branches of work instead ofbeing applied to almost every class of transport. The wastage in horseflesh during a campaign is appalling, and a good deal of it could be prevented by the adoption of mechanical haulage.

Why Amateurs Avoid Competitions.

"Many of the owners of automobiles who are spending their leisure with this modern vehicle, have given up their favorite recreations for it, yet in vacation seasons the motorists are going their own ways alone," says R. R. l'Hommedieu, in the San Francisco Chronicle. "There is something radically wrong, for these men enjoy coming together in competition and in a friendly way. The only solution that seems feasible was brought out yesterday, when the situation was being discussed in automobile row, to the effect that up to the present time automobile contests, even of the most simple nature, have been dominated by the professional An amateur owner has felt himself handicapped out of the contest before it began, and therefore has lost interest in road races, hill climbs, endurance or reliability contests.

"The automobile needs these gatherings, for more enthusiasm is engendered for good roads and proper legislation than all the club and association literature sent out in cold type through the mail. The fact that an owner takes his pleasure alone, on all occasions, no inducement being offered otherwise, tends to nourish the selfishness in mankind and make him inconsiderate. He dashes along the road, kicks up dust, on a hunt for his own free pleasure, disregarding every one and everything but self. The sooner those who control the clubs and associations realize this fact and segregate the professional and semi-professional from the purely amateur driver, the quicker will cease the cry that programmed events cannot be held on account of the lack of entries."

Britons Discover an American Miracle.

Tales of "Yankee ingenuity" have a great circulation abroad, but it has remained for Motoring Illustrated to credit those in charge of the laying out of the Vanderbilt cup race course with the ability to beat gravity. The course, according to this credulous English publication, is remarkable in the character of its grades, "one half the circuit being slightly down grade and the other practically level."

SUBSTITUTE WINS DENVER RACE

Ball Takes Mathewson's Place and Captures 290 Miles Contest—Only Two Cars Survive the Long Grind.

Harry Ball, a 20-year-old driver, surprised the natives on Labor Day, when he won the Denver Motor Club's 290 miles road race in a Thomas Forty. He was reckoned too young to too unexperienced to be a dangerous, but that he possessed the necessary skill and daring is indicated by his time—6 hours 26 minutes. After finishing, a protest was lodged against Ball for having received outside help in making repairs on the road. E. Linn Mathewson, who entered the Thomas, had planned to drive, but substituted Ball just prior to the start.

L. W. Lorimer, driving the Chalmers-Detroit "Bluebird" was second, 9 min. 40 sec. behind the winner. None of the other contestants finished after Lorimer had crossed the line, as the race was then stopped.

In the field with Ball and Lorimer were two White steamers, driven by Gus Siegried and Fred Dundee; two Colburns, a thirty and a forty, pilotted respectively by Bert Colburn and Harold Brinker; a Great Smith, with C. A. Clark at the wheel; Pierce's Peerless, Al. Eubank's Studebaker, and E. W. Swanbrough's Corbin.

Starting eight minutes behind Lorimer's Bluebird, Ball pushed his Thomas hard and gained little by little each lap, until in the 16th round, when he took advantage of an acident to Lorimer's car and got in front and thereafter was never headed.

Lorimer held the lead until the 16th lap, when the seat of the "Bluebird" gave way, hurling the driver and Burns, his mechancian into the air. Lorimer got into his car again and seating himself on the gasolene tank, continued, leaving his mechanician behind.

Bert Colburn (28-30 Colburn) might have finished third, but for an accident on the 18th lap, when he ran into a wagon and wrecked his car. At the time he was in third place. The other Colburn car, driven by Brinker, was ditched on the sixth lap. The first car to go out was Dundee's White, a broken connecting rod putting it hors de combat. The other White suffered an epidemic of tire trouble, no less than twelve changes being required. Swanbrough's Corbin broke its steering rod on the 9th round. The others had their share of ill luck but Siegfried's White, the Pierce, the Great Smith and the Studebaker were still running when the race was ordered stopped. All were hopelessly out of the fight, being from 60 to 150 miles behind when Ball crossed the line the winner.

The race was run over a circuit of 14½ miles, 20 laps constituting the race. The fastest lap was made by the Corbin. It finished its second round in 15 min. 56 sec.

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INGENIOUS SCHEMES OF SCORCHERS

Typical Bluffs to Which the Cop is Apt to Fall—They Don't Work When He Gets Wise to Them.

Ingenuity marks many of the ruses and excuses used to avoid arrest for overspeeding, and the experiences of the cycle policemen whose duty it is to haul in offenders are sometimes rich with novelty. Numerous stories of schemes for thwarting or "bluffing" the police are afloat and many of these have been gathered into one "story" which the western newspapers are passing from one to another, as the exploits of local automobilists and cycle "cops," each paper adapting the account to its own town by a judicious insertion of the proper street names to lend verisimilitude to the tale.

For the benefit of those who would like to read it before it appears in the local newspaper, it is given herewith, all ready for treatment with scissors and paste pot and only requiring the writing in of the street and boulevard names where the blanks appear and the putting in of the word "north," "south," "east," or "west," as the case may be, together with the selection of the name of a county in a neighboring State.

Most of the experiences related are paralleled by truthful incidents, so that it is all good enough to be true, and it reads as follows:

The captured automobilist is generally very certain that the policeman is wrong about his speeding. And sometimes he digs up an excuse that gets him away for that time anyway.

One young man who lives in the —— End was in the habit of going pretty fast in his car and several times he ran afoul of the motorcycle policeman. But as he had shown himself decent enough the men didn't want to take him in too often.

One evening the young chap came down —— road doing about 40 miles an hour, which was something more than the squad could stand for, so they arrested him.

"Well, the minute I rode up alongside," said the policeman who did it, "a girl who was in the care beside him, a peach, began to shriek and holler like anything. She squirmed around and made on she was having a fit of hysteria. She was crying out about having her fellow arrested.

"Well, the chap turned to me and said: "Say, you're not going to arrest me with my girl as bad off as all this, are you?"

"It looked like a bad case, and after figuring it all over I told him to go along this time, but to cut it a little slower next time.

"This chap was one of those who couldn't keep his head shut and soon it was going all over town. It was all a plant. He had the girl coached to do all that hysterical business because he knew he could get away with it if she laid it on strong enough. And he was talking about it everywhere and thought he had a good joke on the police.

"Before it got going very far another chap who heard of it tried it. I was riding through —— Park when I saw a machine stopped by a motorcycle man and I rode up. There was the same performance going on, but as I'd had some of the kidding about the first fellow I didn't let this one get off that way.

"I tipped off the other policeman about the trick of a week ago, and he took the man in. It was wonderful the way that woman came out of her hysterics the moment she understood that it was all off and no use to try any more."

One of the motorcyclists was watching —— avenue near —— street one afternoon, when along came a car decorated with the red cross front and rear to mark that it was a doctor's. There isn't anything that a cycle policeman likes less than one of those signs. They have no value in earning the owner immunity, but the driver is always trying to get away on the strength of them.

This doctor's car was going close to 35 miles an hour, which is something like four times the limit in that neighborhood. The motorcycle man rode out and stopped the car.

"I'm on a life and death case," declared the driver, who looked like a doctor, "and you stop me at your peril. Every moment means a lot."

"In that case," said the policeman, "go ahead. I won't interfere in such a matter."

Off to the north dashed the automobile.

The motorcycle man had his suspicions, and he wheeled over to —— avenue himself. He kept the automobile in sight, and finally turned east on —— street.

The automobile was standing in front of a well-known apartment house. The cycle policeman went into the house and asked the hall boy if anyone had come in from the street recently. The boy answered "No."

Then the cycle man when where his instinct had told him from the first he would find the doctor. There he was in the restaurant.

With him were two women, with whom the doctor was laughing. A waiter was just bringing in one of those iced buckets, and the doctor apparently was getting ready to make an afternoon of it.

The bicycle man went out on the street and got the policeman on post. Together they returned, just as the doctor and his friends took their first sip, and the doctor lighted up a cigar.

"Is this the life-and-death case, doctor?" asked the bicycle man as he walked up to the table.

The physician was fussed for the moment, but soon recovered his composure.

"Oh, I've been there already," he said.

That was too much for the cycle man, and he arrested the doctor then and there.

A man was arrested on —— boulevard one afternoon by a policeman who had timed him at 40 miles an hour.

The man protested that he hadn't been going anything like that fast, and so on through the usual tale. On the way to the station house the policeman was riding where he could see the speedometer on the automobile. It was one of those which have a red hand to mark the maximum speed, and the policeman noticed that this hand pointed to 40 miles an hour.

"Why, look there," he said to the automobilist, "the hand on your maximum speed shows you were doing 40, just what I told you."

"Oh, that," came back from the driver in a flash, "that doesn't signify. I did that two weeks ago in —— county, and I forgot to turn the darn thing back."

Some other drivers have a little custom of taking two or three pegs out of the speedometer gear, so that when the notches down at the wheel strike there will be two or three that miss on each round. As a result, the dial shows about 15 miles an hour when actually the driver is going 25 miles or so. When a policeman gets one of these operators, the cop is always invited to observe the speedometer, and to see how carefully the man is driving.

Then when the policeman says the speedometer's all wrong it is the cue of this man to say:

"Well, officer, you say my speedometer is wrong, but I have it on there, believing it's right. What am I to do? I have done my best to keep within the law," and so on. Which generally goes until the policeman makes a bluff at offering to adjust the speed measuring device with his own.

Incidentally some judges demand a great deal from a policeman in the way of being sure that his speedometer is all right.

The other morning a man was running a car up —— street almost 50 miles an hour. It was about 3 o'clock, apparently a safe hour.

As he dashed past —— avenue there was a snapping and whirring, and out leaped a motorcyclist, bound after the car. It took a long, hard chase to get him, but the policeman finally nabbed his man.

"Well, what's the sense of pinching me at this hour of the morning?" demanded the automobilist. "There isn't the least bit of danger, no matter if I was going as fast as you say I was."

"I guess there is danger," said the policeman. "Suppose there was some drunk staggering across the road. What a fine mess you'd make of him. Or suppose a sleepy milk wagon or baker's wagon driver was going across the avenue slowly. You'd hit him before you could help yourself. I guess there's plenty of reason why you shouldn't speed at this hour of the day any more than any other. Come along."

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WHERE MOTORING IS STRENUOUS

Explorers Conquer 36 Per Cent. Grades Among Colorado Mountains—Home Seekers Make 2,000 Miles Trip.

Few residents of the East realize the strenuous usage to which the motor car often is subjected in the far West, where roads are unimproved and where towns and "magnificent distances" are the rule, some



EXPLORING PARTY ON RAMBLER IN THE MOUNTAINS

of which uses are suggested by the accompanying illustrations. In one picture is H. E. English, of Greeley, Colo., who carried a party of fellow explorers 150 miles up into the mountains to Horse Shoe Park, 9,000 feet of rough going above the level of the sea, taking a burro along to help in case of need, but no emergency arose. Mr. English made the trip in a Rambler car which carried, in addition to its own weight, five passengers with provisions and camping outfit aggregating 1,600 pounds. The journey was made without mishap over roads where grades as steep as 36 per cent. were encountered. The only trouble encountered was a single puncture.

The other illustration shows a Rambler car that participated in the rush at the opening of new government lands. Its occupants are W. G. Raish and his family of Clarks, Neb., who traveled 2,000 miles over all sorts of roads to the San Luiz Valley. What such a journey means where towns and even solitary habitations are few and far between, can be judged by a glance at the automobile burden as shown in the picture. Rough riding by day and camping out at night was the program, and the load carried, including the passengers aggregated 2,140 pounds. It included tents, a gas range, cooking utensils and assorted baggage.

Garage Robbers Use Chloroform.

"Kindly Pass the Chloroform," was the title of a song which once was sung on the stage, and that is just what one bold, bad burglar told his pal one evening last week, when they wished to try chloroform on the dog at J. T. Barron's garage in Chicago. This they quietly did and then managed to steal a $3,000 touring car. The robbers however, were very poor motorists, for they had only steered the car a few blocks when the driver ran into a curb, smashing the front wheels and axle. A policeman saw the smash-up and hastened to the scene, but the men, who had been thrown out did not wait to chloroform him. Instead, they took to their heels. Mr. Barron was then notified and a hunt for the anaesthetic artists was started, but ended without result, for in their flight the fugitives had a sufficient handicap to give them the race.

AIDING SPEED LAW OBSERVANCE

Chicago Automobile Club's Efforts Offend Green Bay Authorities—But Kenilworth Invites Co-operation.

Since the warnings of Chicago Automobile Club sentinels at each end of a measured speed trap on the Green Bay road, have spoiled much of the Saturday and Sunday "pickings" in that section, the club has been notified by the Green Bay authorities to remove said sentinels under penalty of arrest and punishment. The club has refused to obey this order and will fight the case if necessary, for the opinion of its members is that the solution of the speed problem lies not in ambushed detection, but in open, polite warning and reminders to motorists. A similar case was thrashed out recently in England, in which the court finally decided that no person could be restrained from attempting to urge another to obey the laws. Unlike the Green Bay case, golden rule tactics prevail between the Chicago club and the vilage of Kenilworth. Recently the club received a note from the Kenilworth authorities which read: "This letter is to suggest that the village of Kenilworth would like your co-operation in the regulation of automobile speeding, and to that end requests that you send out a flagman on Saturdays and Sundays to regulate the speed of automobiles through our village." As a result, sentinels of the Chicago Automobile Club have been stationed at each entrance to the village.



EMIGRANT RAMBLER EN ROUTE FOR NEW LAND OPENING

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The Week's Patents.

891,072. Controlling Mechanism for Motor Vehicles. Charles H. Humphreys, Torquay, and Vincent J. Scantlebury, Reading, England. Filed Feb. 2, 1906. Serial No. 299,165.

1. In a speed controlling mechanism for motor vehicles, the combination of a clutch; a lever controlling the same; a shaft capable of a rotary and a longitudinal movement connected to said lever; means to rotate said shaft; a second shaft capable of a longitudinal movement only and provided with a collar, and means on said first shaft to engage said collar, substantially as described.

891,152. Driving Mechanism for Motor Vehicles. William H. Douglas, Belleville, N. J., assignor to Healey & Co., New York, N. Y., a Corporation. Filed Oct. 9, 1907. Serial No. 396,605.

1. A driving mechanism for motor vehicles, comprising two motors, gear wheels driven from said motors, connecting shaft having universal joint connections with the said gear wheels, and traction wheel shafts to which the traction wheels are secured and having universal joint connections with the said connecting shafts.

891,168. Vehicle Spring. Nicholas Hee, Baldwinsville, N. Y. Filed July 28, 1906. Serial No. 328,203.

A spring of the class described, comprising a body portion formed of a plurality of superposed leaves of upwardly increasing lengths and with eyes at the ends of said body portion leaves, means for connecting said body portion at the ends and centrally thereof to a vehicle, a shock absorber comprising a plurality of leaves of downwardly increasing lengths and bearing upon said body portion, U-shaped clips bearing over the respective leaves of said shock absorber at their ends and likewise over the adjacent portion of the body portion, and pins connecting the terminals of said clips through the eyes of the body portion leaves.

891,249. Lamp and Lantern. William S. Hamm, Lakeside, Ill. Filed Feb. 18, 2907. Serial No. 357,940.

1. In a lantern, in combination, a body, a dome having lateral air induction ports, an annular diaphragm above the ports, an annular apertured diaphragm below the ports, a flue member tapering upwardly throughout its length, fitted in the central apertures of the diaphragms, hollow downwardly tapering lobes havingforaminous walls arranged annularly upon the outer walls of the flue member and leading down from the apertures in the lower diaphragm.

891,250. Lamp and Lantern. William S. Hamm, Lakeside, Ill. Filed Feb. 18, 1907. Serial No. 357,941.

1. In a lantern, in combination, a body having a light-emitting side face, a dome having lateral air ports, a pair of annular diaphragms in the dome one above and the other below the air ports, the lower diaphragms having apertures, a tubular member fitted within the central apertures of the diaphragms, and a hollow lobe of foraminous material depending from the lower diaphragm and being in register with an aperture thereof.

891,302. Radiator for Automobiles. Max Steiner, Newark, N. J. Filed Feb. 15, 1908. Serial No. 416,023.

1. A radiator consisting of a series of round tubes, each tube having a single helical groove in its periphery, the groove being flat and leaving flat contacting surfaces between the tubes.

891,322. Carburetter for Explosive Engines. Patrick H. Brennan, Syracuse, N. N. Original application filed Jan. 11, 1901, Serial No. 89,309. Divided and this application filed Nov. 22, 2902. Serial No. 132,290.

1. In the carburetter of a gas engine, the combination with the main valve shell, of a valve therein, a source of supply for the gasolene, a float chamber connected to the source of supply, a pipe from the float chamber to the shell, a supplementary pipe from the source of supply directly to the shell, a nozzle on said supplementary pipe to conduct the gasolene direct to the shell and a needle valve to control said supplementary supply.

891,328. Vehicle. Irving Cowles and Ernest H. MacDowell, South Haven, Mich. Filed June 21, 1906. Serial No. 321,178.

1. In a vehicle, the combination with the body; forked arms at each end of the body; axles; side bars connected to said axles; truss rods for the central portion of said side bars, the said side bars between the ends of the truss rods and axles being adapted to spring; upwardly projecting arm-like ways at the ends of the side bars; rollers having channeled rims adapted to engage said ways arranged in the forked arms on said body; journals on which said rollers are slidably mounted; springs at each side of said rollers for yieldingly retaining the same in position; tie bars for said ways extending outwardly at each side thereof beyond the vehicle wheels; centrally arranged double elliptic springs connected to said body and side bars; cylinders connected to said side bars by universal joints; plungers for said cylinders; plunger rods for said plungers connected to said body by universal joints; a tank or chamber; and connections for said tank or chamber to the lower ends of the said cylinders, substantially as described.

892,340. Valve Operating Mechanism for Hydrocarbon Engines. Russell Huff, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Oct. 1, 1907. Serial No. 395,378.

1. A dust guard for sliding connections consisting of a nut and a tubular metal portion of greater diameter having one end bent inward and permanently secured to the sides of the nut between its ends.

891,357. Motor Vehicle. Frank J. Mohan, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Sept. 30, 1907. Serial No. 395,283.

1. In a vehicle body, the combination with the body of a metal bead or strip and securing screws passing through said strip into the body, the said strip having countersinks larger than the screw heads, and fusible metal buttons filling said countersinks, for the purpose set forth.

891,366. Internal Combustion Engine. James H. Pierce, Bay City, Mich., assignor by mesne assignments, to General Machinery Company, Bay City, Mich., a Corporation. Filed Nov. 8, 1906. Serial No. 342,489.

A motor having a cylinder, a piston and a closed crank case, the cylinder having a passage with its ends in the cylinder and adapted to have its ends alternately uncovered on the limits of movement of the piston, a carburetter having its outlet connected to a pair of pipes, one pipe entering the crank case and having a suction valve therein, and the second pipe passing from behind the suction valve to the cylinder and entering the cylinder at a point approximately in a line equidistant between the ends of the passage in the cylinder, the end of the piston uncovering the outlet of the second pipe only at its upward limit of movement.

891,368. Means for Preventing Reversing of an Explosive Engine. William B. Potter, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 26, 1904. Serial No. 234,379.

1. In an engine, the combination of a crank disc having a finished periphery, a stationary abutment, and a wedging means loosely held between said disc and the abutment for preventing reverse movement of the former.

891,429. Vehicle Wheel. Joseph Luppino, New London, Conn. Filed June 10, 1907. Serial No. 378,179.

1. The herein described wheel comprising a rim formed from a series of sections hinged together, said sections of U-shape, the tread portions extended forming integral spring spokes, substantially as described.

891,462. Spring Wheel. Samuel S. Childs and William Childs, Jr., Bernardsville, N. J. Filed May 25, 1907. Serial No. 375,580.

A spring wheel comprising a body portion having a felly thereon, a rim surrounding the felly at a distance therefrom, solid non-elastic blocks arranged concentrically on the inside of the rim, the blocks being narrower than the space between the rim and the felly, resilient blocks filling the space between the felly and the rim and having radially arranged end surfaces to bear on the solid blocks, a bolt passing through the felly and into the resilient block and securing the block to the felly.

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THE DAYTON MOTOR CAR CO., Dayton, Ohio, U. S. A.

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the resilient block having a recess to receive the head of the bolt to allow compression of the material of the block when the block is compressed, said recess permitting a slight movement of one side of the block when torsional movement is applied to the wheel.

891,467. Vehicle. Joseph H. Diel, Stockton, Cal. Filed Feb. 18, 1907. Serial No. 357,829.

1. A wheel hub porvided with a stub axle extending therefrom and having a stop-collar keyed thereto, provided with an integral yoke and with an annular bearing recess between the body of the hub and said stub axle, a driving axle having a yoke, coupling means between said yokes, a sleeve within the bearing recess of the hub and provided with spaced arms, and an intermediate axle carried by said driving axle and having a collar keyed thereto provided with spaced arms and pivotally connected to the arms of said sleeve.

891,475. Clutch. James G. Heaslet, Detroit, Mich., assignor to The Garford Company, Elyria, Ohio, a Corporation of Ohio. Filed July 17, 1907. Serial No. 384,172.

1. In combination in a clutch, a driving member, a driven member, a series of rings having an axial movement with reference to said members, clutch discs mounted upon the driven member and projecting between the rings a plurality of resilient members for compressing the rings against the discs, and a plurality of levers co-operating with the respective resilient members.

891,498. Pneumatic Tire for Wheels of Vehicles. Andre Michelin, Paris, France. Filed Dec. 30, 1907. Serial No. 408,475.

1. A bolt for maintaining in position on the rim of a wheel one edge only of the outer cover of a pneumatic tire, composed: of a screw-threaded stem; a plate fixed perpendicularly on the extremitv of this stem; a wing formed on this plate, inclined at an angle suitable for bearing against one of the edges of the cover of the tire; and of a nut screwing on to the said stem.

891,522. Vehicle Wheel. Lee W. Bryant, St. Louis, Mo. Filed Sept. 6, 1907. Serial No. 391,668.

1. In combination with a wheel having a series of spokes a rim encompassing the wheel and spaced a suitable distance from the ends of the spokes, bonds secured to the opposite faces of the spokes at the ends of the spokes, and U-shaped springs engaging the rim and having their arms passed between the bands on opposite sides of the spokes, then bent inwardly towards the spokes and secured with their ends to said bands, substantially as set forth.

891,523. Lifting Jack. F. C. Butler and Eugene Cook, Kalamazoo, Mich.; said Butler assignor to Cook's Standard Tool Company, Kalamazoo, Mich., a Corporation of Michigan. Filed Aug. 21, 1907. Serial No. 389,524.

1. In a lifting-jack, the combination with a frame provided with a removable side-plate, of a rack bar; a lever; a pivot for said lever arranged in suitable bearings in said frame; a pair of pawls having laterally-projecting pins thereon mounted on said lever, one at each side of its pivot; an inverted U-shaped spring, the arms of which are arranged to engage the said pins on said pawls, whereby the pawls are held yieldingly in engagement with said rack; a pin on said frame, by which said pawl spring is supported; a Y-shaped reversing plate mounted on one of the bearings for said lever pivot, arranged so that its upwardly projecting fingers are adapted to engage said pins on said pawls, a button arranged to engage the lower end of said reversing plate for swinging and locking it out of its operative position: a boss on said frame; a pivot screw for said button, tapped into said boss; a U-shaped spring mounted on said boss, with one of its arms arranged to engage said reversing plate and the other the frame, said spring being of greater strength than said spring for said pawls; a stop on said reversing plate for said button; and means for securing said removable side-plate in position, whereby said pawl spring and said reversing plate are retained in position.

891,529. Shock Absorber. Arthur Dutrieux, Le Quesnoy, France. Filed Aug. 14, 1907. Serial No. 388,568.

An apparatus for deadening the sudden return of springs in which a piston is formed with holes and provided one one of its faces with small elastic plates, also also pierced with corresponding holes, of which the number decreases with each plate and each of which plates partially covers the other, the said plates having one of their extremities fixed to the piston and the others standing away in such a fashion that they apply themselves successively upon the piston according to the suddenness of the return of the spring to oppose themselves to such sudden return and to permit its slow return substantially as described.

891,536. Change Speed Gearing. William E. Goodyear, Newark, N. J. Filed Nov. 20, 1906. Serial No. 344,272.

1. A gearing having in combination a driving member, a driven member, and means for positively transmitting the motion of the driving member to the driven member at different speeds, such means containing an element which travels in a circular path without rotating on its own axis.

891,537. Wind Shield. Oscar C. Graff, Chicago, Ill., assignor to C. P. Kimball & Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 23, 1908. Serial No. 412,355.

1. The combination with a wind shield having a fixed portion and a foldable portion, of an adjustable support for said foldable portion comprising a bracket secured to the fixed portion, a sleeve rotatably mounted in said bracket, a clamp rod slidably engaging said sleeve and pivoted at one end to said foldable portion and a clamp having a threaded engagement with the other end of said clamp rod whereby a locking or releasing of the clamp rod is effected.

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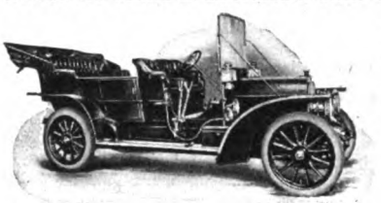
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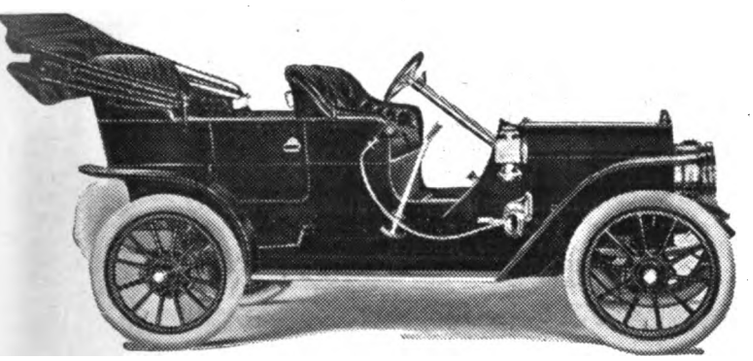


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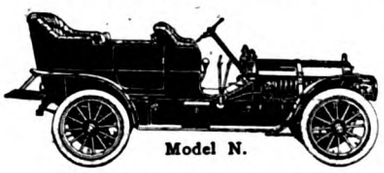
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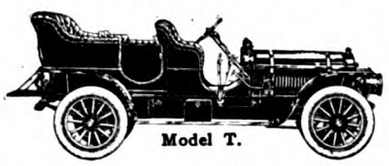
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All Nationals have two complete systems of ignition.

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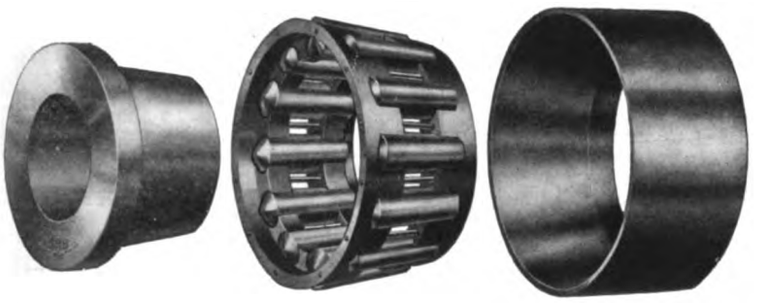
Trusting this letter may be of benefit to you, I remain, Yours very truly, (Signed) JOSEPH A. WEBBER, Lieut., Aide to Chief.

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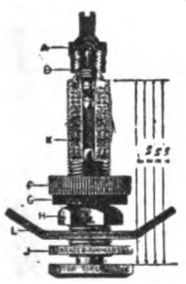
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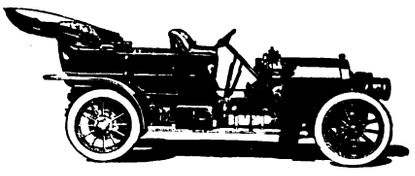
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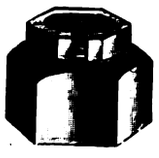
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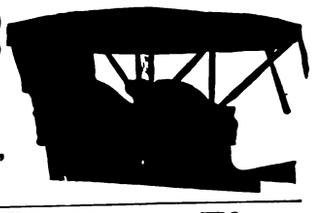
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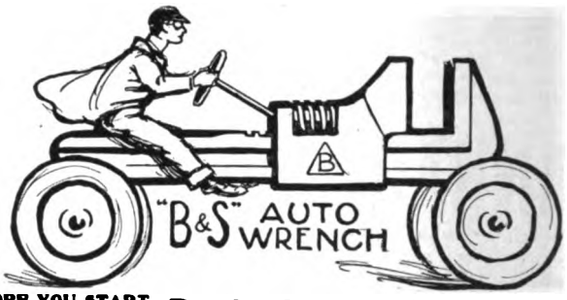


For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG—DURABLE
CALELESS—RUSTLESS
SMOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

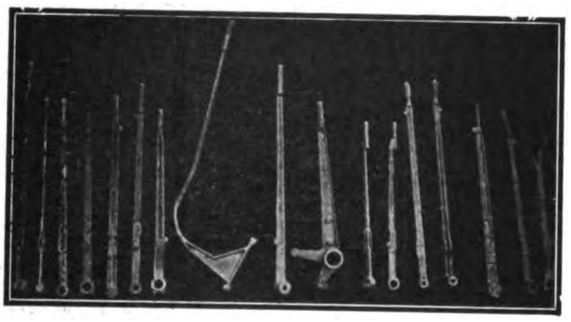


BEFORE YOU START Be Sure You Carry a B. & S. AUTO-WRENCH

For Sale Everywhere.

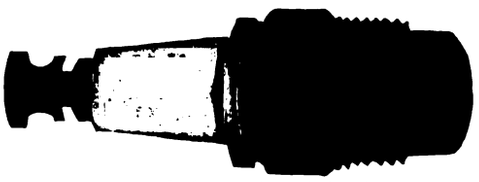
THE BILLINGS & SPENCER CO., Hartford, Conn.

PARSONS' MANGANESE BRONZE LEVER CASTINGS



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THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.



The Best Proof

of the real satisfaction given by the

SPLITDORF Common Sense Plug

is the increasing demand for it: Our Plug Department is working overtime to fill orders. Use one of these Plugs in your engine a few days and you will discover why it gives such real and lasting satisfaction. Made in all sizes and threads. Price $1.00.

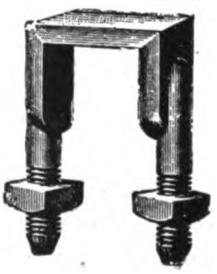
C. F. SPLITDORF, Walton Avenue and 138th Street. Branch—1679 Broadway NEW YORK

FORGINGS for the AUTOMOBILE TRADE



Satisfaction Guaranteed

Thousands of our Spring Clips are now in use, having been supplied to the leading automobile manufacturers.



Have you secured our prices?

THE M. SEWARD SONS COMPANY, New Haven, Conn.

"RAJAH" SPARK PLUGS

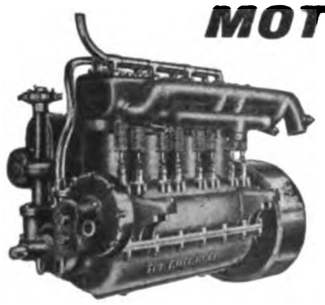
IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

BLOOMFIELD, NEW JERSEY, U. S. A.

(Watsessing Station, D., L. & W. R. R.)

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909
4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

Give Your Car a Good Name by using

SUPPLEMENTARY SPIRAL SPRINGS

Change a bone-shaker and a spring-breaker into an easy riding, real automobile in which you can take pride and your passengers comfort. The use of S. S. S. change a near-good car to a real good car and add the finishing touch of luxury to the best cars. Our booklet tells you all about them, and is yours for the asking. Write for it.

SUPPLEMENTARY SPIRAL SPRING CO., 4555 Delmar Ave. St. Louis, Mo.

New York Branch, Removed to Motor Mart Building. (Larger Quarters.)

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Volume XVIII New York, N. Y., U. S. A., September 17, 1908 Number 25

THE MOTOR WORLD

A trade paper giving the World's Motor News

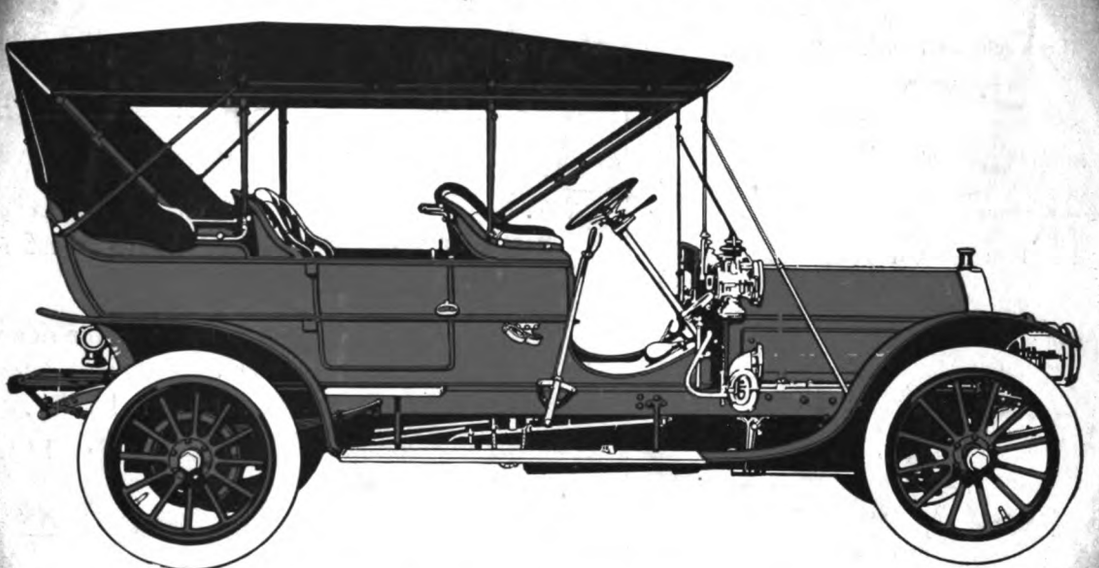
Ten cents a copy—
Two dollars a year



The Newest

GREAT ARROW

SIX-Cylinder Car



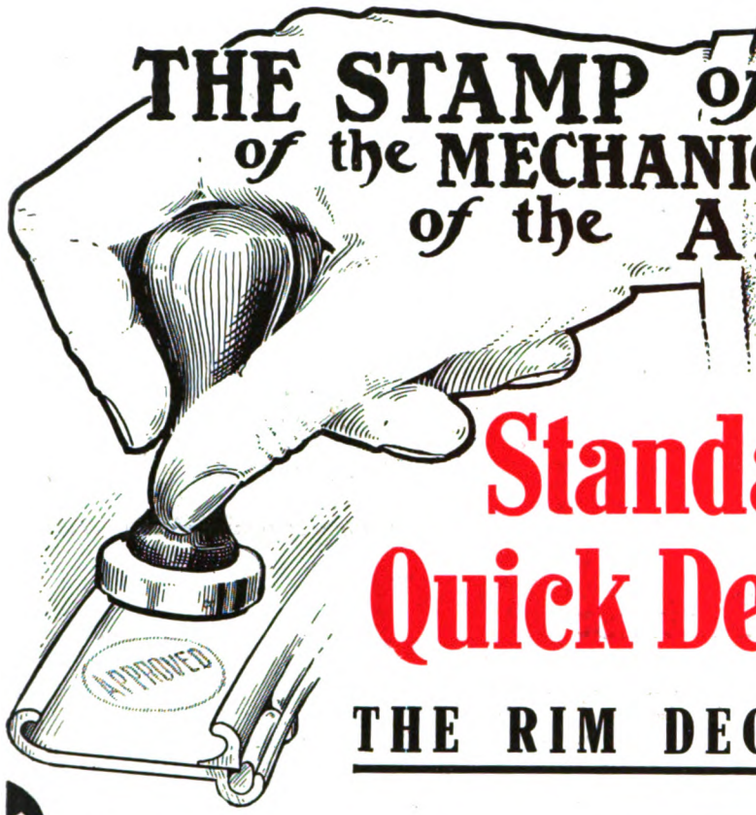
is the most luxurious and comfortable car running to-day, no matter what the country of origin. The feeling while riding in a six-cylinder car, even at a high speed, is exactly like that of coasting down a gentle grade with the clutch thrown out. This is felt not only on the level, but even when climbing a hill.

HERE ARE THE 1908 TOURING CARS
- 4-cylinder Great Arrow, 30 H. P., Price, $4,000
- 4-cylinder Great Arrow, 40 H. P., Price, $5,000
- 6-cylinder Great Arrow, 40 H. P., Price, $5,500
- 6-cylinder Great Arrow, 60 H. P., Price, $6,500

THE GEORGE N. PIERCE COMPANY,
Members A. L. A. M.
BUFFALO, N. Y.

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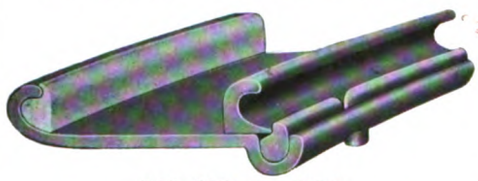
THE STAMP of APPROVAL of the MECHANICAL BRANCH of the A.L.A.M.



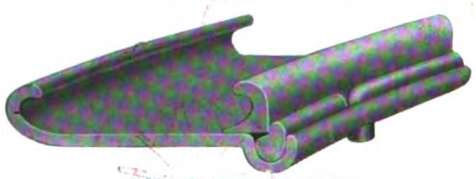
THE Standard Universal Quick Detachable Rim

THE RIM DECIDED ON FOR 1909

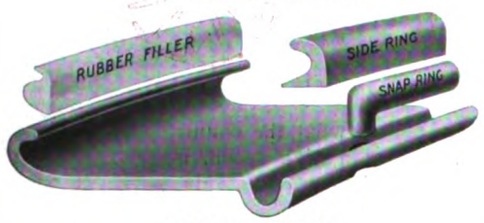
The cuts show the simplicity of operation and the mechanical worth of the rim.



FOR DUNLOP TIRE



FOR CLINCHER TIRE



RIM AND PARTS

¶After two years of consideration, the automobile manufacturers have chosen the Standard Universal Quick Detachable Rim as the most desirable of all the rims shown to be the standard equipment for American cars as soon as this change can be conveniently brought about. Its adoption signifies its perfection.

¶ There are only two parts to remove—the side ring and the snap or locking rim. Accommodates all standard sizes of tires, Clincher or Dunlop. To insure standard equipment all around, specify

Hartford Tires AND Standard Universal Quick Detachable Rims

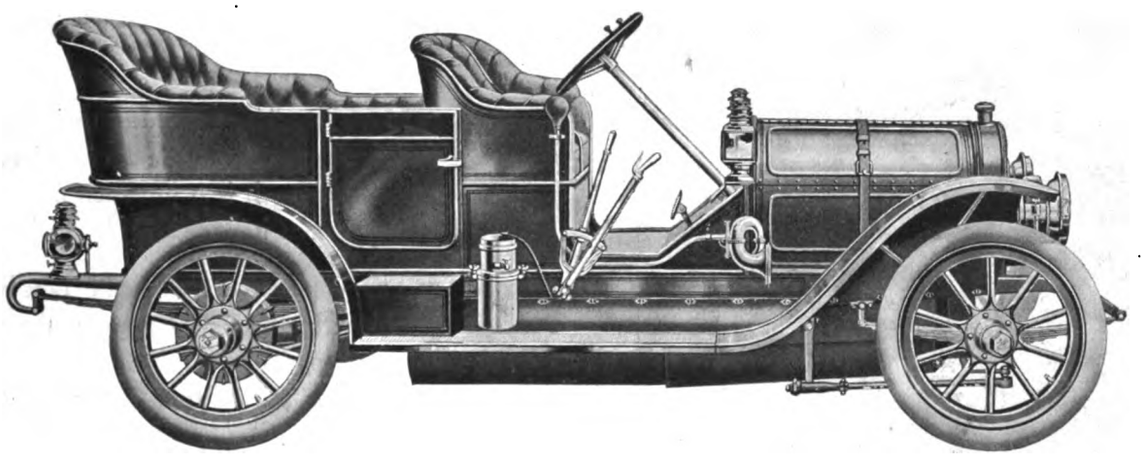
THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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1909 POPE-HARTFORD MODELS 1909



Pope-Hartford Model S Touring Car, $2750

The Pope-Hartford 1909 models embody all that is best in automobile construction and will be conspicuous in the foremost ranks of the automobile world. New and important improvements, not incorporated in any other motor car, are included in these new cars, and each improvement has been thoroughly tested.

We invite comparison of the details of Pope-Hartford cars for 1909 with those of the world's best motor cars. Because of their perfection, refinement and elegance they will appeal to the superior judgment of critical and discriminating purchasers.

OUR 1909 LINE CONSISTS OF THREE STANDARD MODELS:

A Standard Touring Car similar to the above illustration, **Price $2750**

A Standard Roadster . . . . . Price $2750

A Pony Tonneau Car . . . . . Price $2750

The phenomenal success of the Pope-Hartford—for its success HAS been unprecedented—is the story of the development of a selected type of car to the very highest point of excellence and efficiency—a car for continuous service, excelling in accessibility of parts and low cost of up-keep, easy to handle, comfortable, of refined appearance—a car that will do practically anything that any other car will do, no matter what the make, price or horsepower—a car, in brief, that offers greater value for its purchase price than any other make of car.

Our catalog, now in preparation, explains fully all the details and mechanical excellence of the new models. Let us place your name on our mailing list for an advance copy.

Agents almost everywhere. Correspondence invited with interested dealers.

Pope Manufacturing Company

HARTFORD, CONNECTICUT, U. S. A.

Members Association of Licensed Automobile Manufacturers.

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Mayo Radiators Make a Good Car Better and Their Use on a Car is a Hall-Mark of Quality.

¶ Mayo Radiators are made in a quality shop. In their construction no expense is spared, no crude methods obtain. In their use complete satisfaction results.

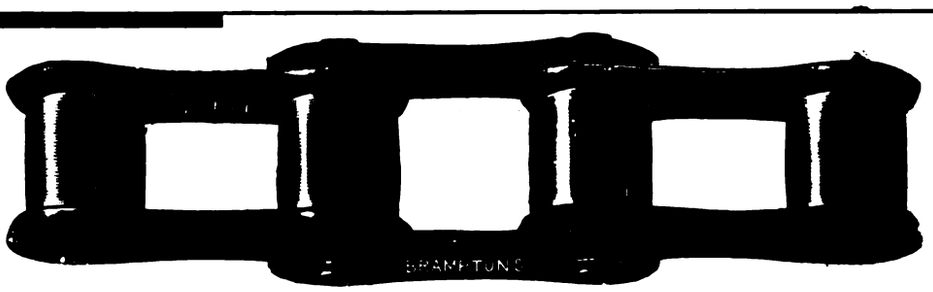
¶ Mayo Radiators perform their functions well under all conditions—and conditions at times are exacting. It is at just such times that Mayo quality asserts itself.

¶ The engineer can eliminate possible radiator troubles from his calculations by the adoption of the best possible radiator. The test of years and use has proved that we make it.

¶ Our capacity limit on new contracts is rapidly being reached.

MAYO RADIATOR COMPANY, New Haven, Conn.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides of the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement. THE BRAMPTON CHAIN is made of self-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like THE CELEBRATED BRAMPTON CHAIN because some of the other chain makers began to copy the design and shape of the BRAMPTON CHAIN links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the BRAMPTON CHAIN than ever before. These chains somewhat resemble the BRAMPTON in appearance, but the manufacturers of such chains have been unable to copy the material —self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the BRAMPTON MOTOR CHAIN in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMPTON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size. We have in stock chains to fit all American and foreign cars.

YOUR 1909 CAR

You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.
Agents wanted in unoccupied territory. Catalog on request.

CHAS. E. MILLER, Manufacturer, Jobber, Exporter and Importer
Main Office: 97-99-101 Reade Street, **New York**

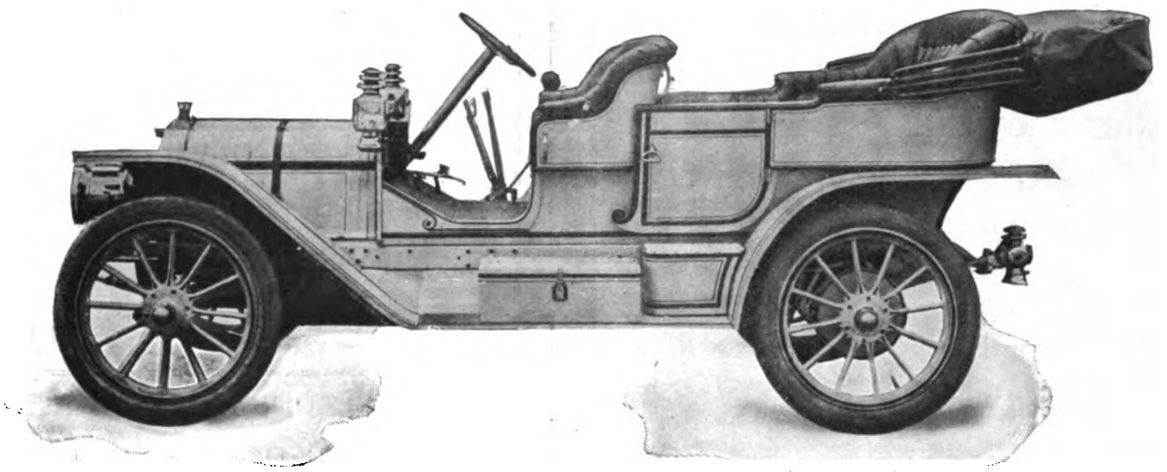
BRANCHES: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Broad St., Philadelphia, Pa. 227½-229 Jefferson Ave., Detroit. 1829 Euclid Ave., Cleveland, O. 1392 Bedford Ave., Brooklyn, N. Y. 824 Main St., Buffalo.

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Announcement of Model X

HAYNES

For 1909



The Haynes for 1909. 45 H. P. $3000.

For 1909 our Models S and U will be discontinued in favor of the intermediate car of 45 H. P., which will be our only model for 1909. Concentration upon this, our most popular type, will permit certain economies of manufacture so that we can afford to add various improvements without raising the selling price, ($3,000).

$3,000 for 45 H. P. is a low price, but it is not a reduction from former Haynes figures, which have always been moderate. On the other hand the car is not "cheap." Chrome vanadium steel is used liberally. Roller bearings are used everywhere. Nickel steel valve heads, electrically welded to stems are a typical refinement. A Bosch magneto is furnished as regular equipment as well as a battery and unit coil system operating through a separate set of plugs, thus giving a double and independent ignition system. Other specifications are as follows:

MOTOR—4-cylinder, 4¼ by 5, water cooled, with very large water jackets.
DRIVE—Shaft drive with Haynes roller-pinion and sprocket at the rear axle which minimizes friction and side thrust and eliminates noise entirely.
CLUTCH—Haynes patent contracting steel band upon bronze drum.
CARBURETOR—Latest type Schebler, water jacketed.
LUBRICATION—Gear driven McCord oiler.
TIRES—36 by 4 all around.
TRANSMISSION—Selective type, three speeds forward and reverse. Ratchet device makes gear stripping impossible.
WHEEL BASE—112 inches.
TREAD—56 inches.
BODY—Touring car for five or seven, or toy Tonneau $3000. Runabout or Hiker type, $2900. (The Hiker type consists of two bucket seats with large gasolene tank on rear.)
Equipment includes Prest-O-Lite Tank, baggage rack and tire holders.

HAYNES AUTOMOBILE COMPANY, Kokomo, Indiana

Oldest Automobile Manufacturers in America.

NEW YORK—1715 Broadway. CHICAGO—1702 Michigan Ave.

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THE SELDEN CAR FOR 1909

Enters upon its second year with a clean record. No "first year" car has ever earned a better reputation or made a better showing.

THE CAR OF MODERATE PRICE

$ 2 0 0 0

Touring Car **Roadster**
Limousine **Landaulet**

4 cylinder, 28-30 horsepower, shaft drive, selective transmission, metal body, pressed steel frame, excellent hill climber, fine finish and style, roomy tonneau, luxurious upholstery, easy riding, smooth running, economical in up-keep, in fact, a high grade car in every particular.

The "Silent Selden"

1909 MODELS READY IN SEPTEMBER

Agency propositions now ready. Send for catalog and specifications.

Selden Motor Vehicle Co.

ROCHESTER, N. Y.

Member A. L. A. M.

TIME WAS when tire worry spoiled much of the enjoyment of motoring and the motorist who footed the bills had no voice in the matter.

THEN CAME THE AJAX wrapped tread tire with its superior services.

AND NEXT THE AJAX 5,000 MILE GUARANTEE —If the user of Ajax tires fails to obtain 5,000 miles service from his tire, it is for us to worry—not him, and we make good:

WITH AJAX TIRES the tire problem resolves itself into a plain proposition. We know that they will do, and we offer you the best kind of an insurance for expressing your willingness to find out for yourself.

IS THERE ANYTHING MORE BUSINESS-LIKE THAN THIS?

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York
Factories: Trenton, N. J.

BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodwood Ave. — Los Angeles, 1040 S. Main St.
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FRANKLIN
Closed Carriages

Franklin automobiles are particularly well fitted for use as closed carriages. And the line of Franklin closed carriages is unusually complete.

They are of a manageable size; roomy and of impressive appearance but not bulky. Their light weight in proportion to power makes them easy to handle. The Franklin full-elliptic spring suspension, and built-up wood frame make them ride more comfortably than any other closed carriages. They do not jolt nor jar over cobble-stones and car-tracks. The Franklin air-cooled motor runs idle any length of time without overheating. And it cannot freeze. These features are specially convenient in town use; in moving slowly through crowded streets; and in shopping and calling.

G Brougham. Handsome inside-driven two-passenger turnout. Long wheel base. Fully equipped. 18 H. P. $2,250.

G Landaulet. This is the only high-grade small landaulet on the market. Its moderate price places it within the reach of all desiring a fine closed car. Seats 4. 18 H. P. $2500.

K-2 Town Car. For city and suburban use this is a most popular model. Chassis same as used in our motorcab. It seats 6. 18 H. P. $3000.

D Landaulet. This model combines elegance and serviceability to the highest degree. Seats 5. 28 H. P. $4000.

H Limousine. No more impressive or handsome motor-car is made. This body is on the H touring car chassis. The vibrationless six-cylinder engine completes the luxury of this handsome model. 42 H. P. $5000.

Any Franklin automobile can be used any day in the year.

Touring Cars and Runabouts for 1909.

G 18 H. P. touring car, $1850.
G 18 H. P. runabout with hamper, $1750. With single or double rumble, $1800.
D 28 H. P. five-passenger touring-car, $2800. Or runabout, with single or double rumble, $2700.
H 42 H. P. seven-passenger touring car, $3750. Or runabout, with single or double rumble, $3600.

All prices F. O. B. Syracuse, N. Y.

Write for the catalog.

H. H. FRANKLIN MANUFACTURING CO., Syracuse, N. Y.

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Premier's Proof of Reliability

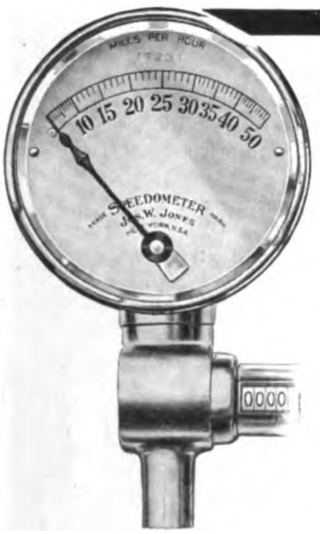
IN A RECORD WHICH STAGGERS MOTORDOM, THE PREMIER CENTURY CAR HAS SET A NEW MARK FOR FOREIGNERS TO SHOOT AT. IT COVERED 12,189 MILES IN 100 DAYS, THE TOTAL BEING 2,189 MILES MORE THAN IT SET OUT TO DO.

This car's performance has proved that America is the leader of the world in the production of a car which is thoroughly reliable, good throughout and capable of withstanding a test, the conditions of which were the most severe a motor car has ever been subjected to, with the result that the findings of a Technical Committee, who tore it down and examined every part, was to the effect that it showed no more wear than a car which had been driven only 1,000 miles. The Premier record has earned for it recognition as the highest type of American-made car.

Send for Catalogue S.

Premier Motor Manufacturing Company

Standard Manufacturers A. M. C. M. A. **INDIANAPOLIS, INDIANA, U. S. A.**



Why pay $40 or $75 for a speed indicator which is in the experimental stage?

$25 buys a perfected

JONES SPEEDOMETER

Eight years experience has brought the Jones to a point where it is the acknowledged standard of the world—the best speed indicator on the market. Jones is the pioneer; it is the only instrument ever awarded a Gold Medal for accuracy and all-round reliability. The Jones at $25.00 actually excells instruments made by other manufacturers for $40 and $75, which are still in the experimental stage!

Write for "The Speedometer," a magazine devoted to speed subjects, and the Special Speed Issue of "The Evening Bulletin," of particular interest to all motorists.

JONES SPEEDOMETER, 76th St. and Broadway New York

BOSTON 109 Massachusetts Ave. CHICAGO 1421 Michigan Ave DETROIT 247 Jefferson Ave.
PHILADELPHIA 259 No. Broad St. CLEVELAND 1841 Euclid Ave.

Warner Auto-Meter

GUARANTEED FOR ONE YEAR.

"Thirty Days' Free Trial"

When a manufacturer is willing to send his product to anyone, anywhere, for 30 days—with no deposit, no agreement to buy, no promise to do anything except give that product a fair trial—he must have more than ordinary confidence in his article. In order for him to have that confidence he must have a most extraordinary product.

That's what we do. We'll send an Auto-Meter to any automobile owner in the country—with no deposit, no agreement, no promise to do anything but put it on his car and give it a fair trial. It doesn't matter whether he has another make of speed indicator already on the car or not. Indeed, for the sake of comparison, we hope he has. We will abide by the decision—for he will always keep the indicator that tells the truth. We claim for the Auto-Meter that it is the only one of which "the dial never lies." We believe that the instrument itself is the most eloquent salesman we have—we're willing to let it do our talking. Send to-day—just tell us what make and model of car you have—size of tires, etc.—and we will send you an Auto-Meter.



Is Right
Stays Right
Accurate At All Speeds

Warner Instrument Co.

Factory and Main Office,
262 Wheeler Ave., Beloit, Wis.

Address your request for Free Trial to Our Nearest Branch House.

New York, 1902 Broadway; Boston, 925 Boylston St.; Philidelphia, corner Broad and Race; Pittsburg, 3432 Forbes St.; Cleveland, 2062 Euclid Ave.; Buffalo, 732 Main St.; Detroit, 239 Jefferson Ave.; Chicago, 1305 Michigan Ave.; Indianapolis, 330-½ N. Illinois St.; St. Louis, 3823 Olive St.; San Francisco, 550 Golden Gate Ave.; Los Angeles, 1040 S. Main St.

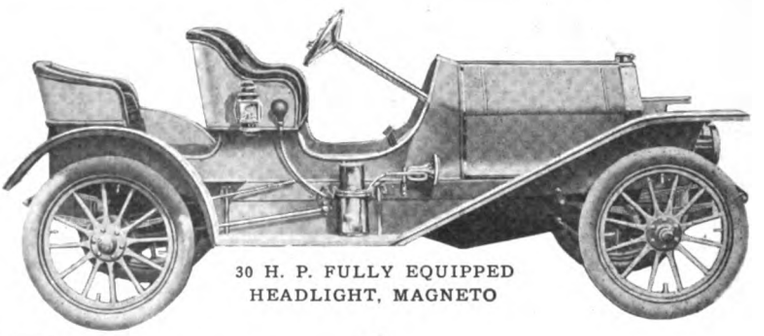
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1909 Overland LINE

The Most Complete in America

MODEL 30

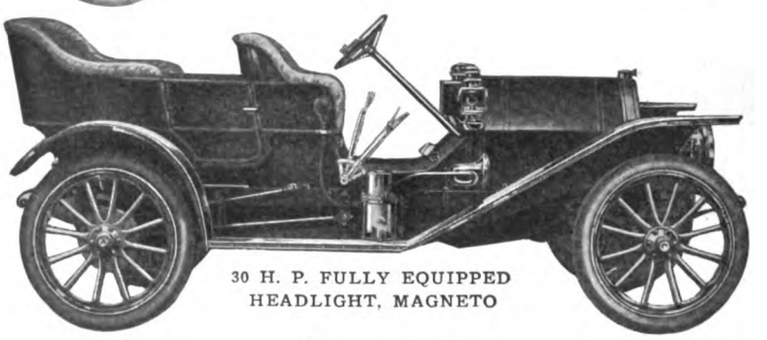
Single Rumble	$1,250
Double Bucket	1,300
Coupe	1,650



30 H. P. FULLY EQUIPPED
HEADLIGHT, MAGNETO

MODEL 32

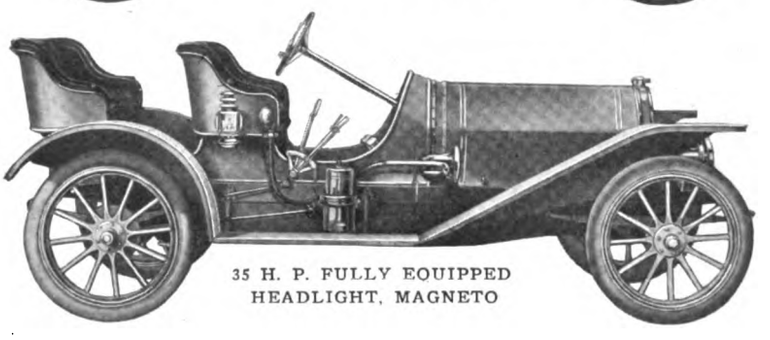
Single Rumble	$1,500
Double Bucket	1,500
4-passenger Toy Tonneau	1,500
5-passenger Tourist	1,500
Coupe	1,900



30 H. P. FULLY EQUIPPED
HEADLIGHT, MAGNETO

MODEL 34

Single Rumble	$2,000
Double Bucket	2,000
4-passenger Toy Tonneau	2,000
5-passenger Tourist	2,000
Coupe	2,400



35 H. P. FULLY EQUIPPED
HEADLIGHT, MAGNETO

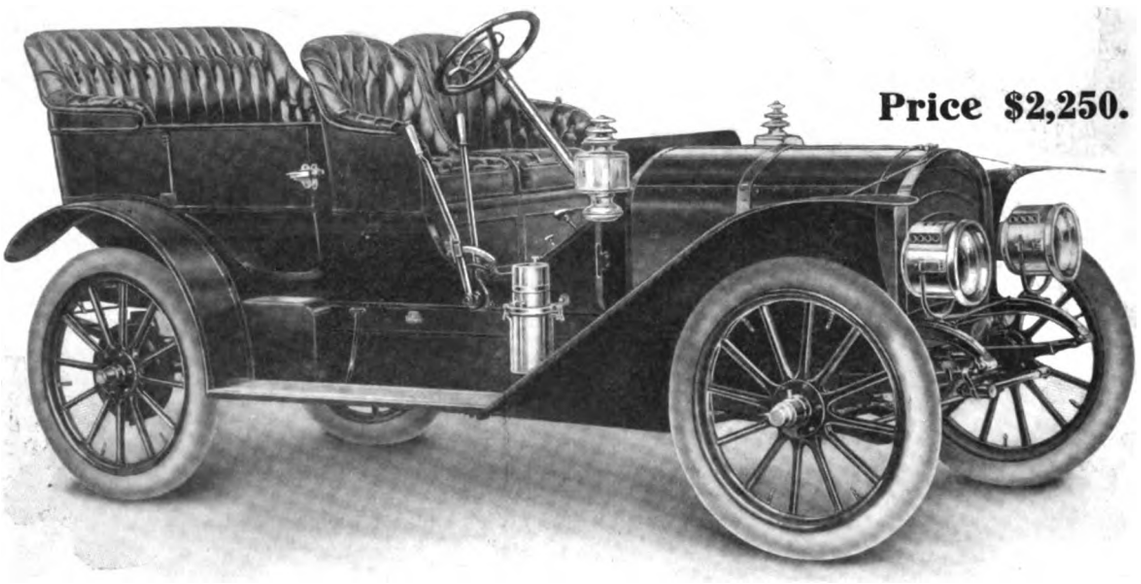
Write for Catalogue to

OVERLAND AUTOMOBILE COMPANY

INDIANAPOLIS, INDIANA

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Rambler



Price $2,250.

THE ADVANTAGES OF THE OFFSET CRANK SHAFT

Here is a simple explanation of the offset crank shaft, the great power developing feature of the Rambler.

Notice a man about to mount a bicycle. He always adjusts the pedal in that position where it will receive to best advantage his full weight on the first downward stroke. The best position for the pedal is just slightly forward of the center of the crank shaft on the bicycle. If he mounted when the pedal was directly over the center of the crank shaft, his weight would fall directly on the bearings and the first downward stroke would be retarded and, therefore, weak.

Now imagine the man's leg as the piston of an automobile engine; the pedal of the bicycle as the crank pin and the crank shaft of the bicycle as the crank shaft of the engine. In the ordinary engine the crank pin and piston (the pedal and the man's leg) are directly over the dead center and until the crank passes the turning point all effort is wasted. Thus, when the explosion occurs, the greatest force falls upon the bearings.

In the Rambler engine at the instant the explosion occurs above the piston the crank pin has moved past the dead center; the crank shaft is in a position to receive the full pressure and turns without friction. Consequently there is no side thrust of the piston and wear on the cylinder walls is thus saved.

Try this Rambler on the hills and notice how steadily and powerfully it pulls when running under load.

Tell our nearest representative to call at your home and take you to your place of business in a Rambler.

THE CAR OF STEADY SERVICE

Thomas B. Jeffery & Company, Main Office and Factory: **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, September 17, 1908. No. 25

MATHESON FORMS SALES COMPANY

Separates Manufacturing and Marketing Departments—Matheson Himself to Direct Sales from New York.

The Matheson Automobile Co. is the style of a new company with $150,000 capital, which was organized on Saturday last to take over and market the product of the Matheson Motor Car Co.'s factory at Wilkes-Barre, Pa. It will be entirely independent of the manufacturing company and will have entire control of sales and agencies.

Arrangements have been made for desirable salesrooms on Broadway from which point the company will market its cars in Greater New York and distribute throughout the country. C. W. Matheson, president of the manufacturing company, who at present is residing in Wilkes-Barre, Pa., will remove to New York and there devote his time exclusively to the marketing of Matheson cars.

The entire capital stock of $150,000 of the selling company has been subscribed principally by bankers and business men of Wilkes-Barre; and, as the manufacturing company simultaneously arranged for a bond issue of $200,000, there will be $350,000 additional capital at the command of the producers of the Matheson car.

Contemporaneous with the announcement of these new arrangements, it was made known that a shaft-driven car listing at $3,000 will be added to the Matheson line for 1909. The present high priced chain geared models at $5,000 and $5,500 will be continued.

The mechanical end of the Matheson company will be in charge of L. C. Kenen, who just has been installed as designer and chief engineer. Kenen obtained his experience in the Renault, Darracq, Clement and Richard-Brazier factories in Europe.

The Matheson company will enter a car in the Vanderbilt cup race; it will be completed in time to be "tried out" in the Parkway Sweepstakes event on October 10. In fact, the Matheson people say it is their intention to play a conspicuous part in competitive events generally.

Bacon Becomes Haynes Sales Manager.

Richard Bacon, Jr., for the past three years western manager of Cleveland Motor Car Co., has been appointed sales manager for Haynes Automobile Co., Kokomo, Ind. Bacon has been identified with the automobile industry for a long time and is also an old bicycle man, having been engaged with the Pope Mfg. Co. for many years. C. B. Warren, whom Bacon succeeds, will, on October 1st, take charge of all territory west of Salt Lake City for the F. B. Stearns Co. He will establish headquarters in San Francisco.

Neustadt Disposes of His Interests.

J. H. Neustadt, one of the Western automobile pioneers, has sold his controlling interest in the Neustadt Automobile & Supply Co., St. Louis, to Dr. E. L. Epperson, of that city. Associated with the doctor are F. J. Tecklenberg and A. B. Schultz, assistant secretary of the Vendeventer Trust Co. Dr. Epperson, who has been identified with several other commercial enterprises, will continue the Neustadt business on its old lines.

Wagon Manufacturer to Make Motor Cars.

E. D. Etnyre, of Etnyre & Co., Oregon, Ill., an extensive manufacturer of sprinkling wagons, is preparing to engage in the production of motor cars. His wagon plant is to be enlarged to three times its present size in order to accommodate the new business. The building operations are due to commence this week. The car that will be made will be one of moderate cost.

Several Pope Receivers are Discharged.

Having liquidated affairs within those jurisdictions, the receivers of the Pope Mfg. Co. in Illinois and in the Southern District of New York, have been discharged by the courts. The receivers of the Pope Motor Car Co. for Southern New York also have been discharged.

M. A. M. WILL EXHIBIT AT CHICAGO

Accessory Association Accepts Offer of Five Cents Extra—Allotments of Space to be Made October 7th.

The Motor and Accessory Manufacturers, Inc., will be officially represented at the Chicago show, February 6-13. The offer of the National Association of Automobile Manufacturers to increase the rebate to M. A. M. members from 15 to 20 cents per foot has been accepted by the officers of the accessory organization.

The latter, as will be remembered, resolved to refrain from exhibiting at Chicago, unless better terms for space were granted; the N. A. A. M. met this view to the extent of tendering an extra 5 cents per foot rebate, setting September 10th as the limit for its acceptance or rejection. Its acceptance removes the only obstacle in sight and as a result, the accessory exhibits will be as numerous and as prominent as in previous years.

The prospectus and rules for the Chicago show made their appearance this week. The rules are substantially the same as heretofore. The allotment of space will be made at the N. A. A. M. offices in New York on October 7th. The show, as usual, will occupy the Coliseum, the Coliseum Annex and First Regiment Armory. The admission fee will be 50 cents, except on the Wednesday of show week which will be "dollar day." Special tickets in lots of 300 will be sold to exhibitors at half price and a special form of invitation ticket will be sold in any quantities for 50 cents each.

Willis Purchases Staley's Interest.

Fred I. Willis, secretary and treasurer of that long established jobbing house, the H. T. Hearsey Vehicle Co., Indianapolis, Ind., has purchased the interests of Frank M. Staley, vice-president of the concern. Willis's purchase has carried with it a change in the title of the company. Hereafter it will be styled the Hearsey-Willis Co.

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In the Retail World.

Louis De Stwolinski and James Hugus have opened a garage on Sast Wall street, Fort Scott, Kan. Both are experienced machinists.

The firm of Ranger & Barrett, 308 Tenth street, South, Minneapolis, has dissolved, Barrett retiring. The business will be continued as the Ranger Auto Co.

Edward Rabenau has disposed of the Rabenau Auto Garage in Iowa City, Iowa, to E. R. Thatcher, of Charlotte, Mich. The latter is an experienced automobile man.

For the Stoddard-Dayton Automobile Co., of Minneapolis, Minn., a large brick garage is being built at 907 Hennepin avenue. Its location places it in the semi-residence section, which is reluctantly giving way to business.

Theodore S. Glover, William C. Foote and Stuart Young have constituted themselves an automobile firm in Norwalk, Conn. They have taken the Wright shops at North Main and Union streets and will start operations immediately.

The Bullock-Goodwin Co., of Biddeford, Me., has leased a local disused carriage factory and will convert it into a modern garage. The building is to be remodeled, and a store and salesroom for cars and accessories will be a feature.

The Buick Motor Co. has opened a branch in Cleveland. A five years lease has been taken by the company on two store rooms in the Dodge building at Euclid avenue and Seventeenth street and salesrooms are being fitted up in a lavish fashion.

The Hopkinson Automobile Co., of Madison, Wis., is spending $12,000 on a new garage on East Doty street. The building when completed will have as large a floor space as any other garage in the state and will contain every modern equipment.

Edward H. Meinders, who has for 14 years been the leading bicycle dealer of Piqua, O., has leased a large building where, in addition to his bicycle business he will conduct a garage and automobile salesroom. The garage will include a repair shop.

Messer Reports Nebraska Outlook Good.

"The outlook for the motor car trade in Nebraska is as bright as the noon-day sun," is the way George E. Messer, the Franklin traveler in that State describes the situation. "The people are all optimistic and prosperous. The crops are good and I never found conditions in any section of the country so encouraging."

Clark, Experimenting, Seeks Relief.

W. E. Clark, former manager of the Deere-Clark Motor Car Co., has equipped a street car with a gasolene engine, and sees large possibilities in that direction. He is carrying on his experiments at Paris, Ill.

Meanwhile, and as a result of his expensive connection with the Deere-Clark enterprise, Clark has filed a petition in bankruptcy. He places his liabilities at $50,000 and states that his only assets, clothing and personal effects, valued at $50, are exempt. His chief creditors are the banks in Rock Island and Moline.

E. V. Receivers Render August Report.

According to the report of the receivers of Electric Vehicle Co., Hartford, for August, as filed in the Connecticut Superior Court, they had on hand on the last day of that month the sum of $218,417. The disbursements during the month totaled $45,483, the largest single item being $28,002, which was paid to George B. Selden. The report in full is as follows:

Charges on account and cash sales	$20,231.00
Purchases on account	6.866.66
Cash	459,40
	$7,326.06

Cash Statement.

Receipts.

Cash on hand Aug. 1, 1908	$242,770.23
Cash collected on E. V. acct.	119.96
Cash collected on receivers' account	20,866.87
Selden royalty	143.71
	$263,900.77

Disbursements.

Pay roll	$12,663.47
Traveling expenses	125.00
Purchasing creditors	3,619.39
Freight and expenses	172.25
Petty cash	459.40
Telegraph and telephone	175.34
Storage	75.00
G. B. Selden	28,002.00
A. L. A. M.	50.36
Licenses	118.00
Pub. Exh. Exp.	23.00
	$45,483.21
Cash receipts	$263,900.71
Cash disbursements	45,483.21
Balance on hand Sept. 1	$218,417.56

Pullman Cars Pay a Profit.

At the annual meeting of the York Motor Car Co., York, Pa., on Thursday last, a 6 per cent. dividend was declared on the $100,000 capitalization, and these officers were elected: President, S. E. Bailey, Philadelphia; vice-president, T. C. O'Connor, New York; secretary and treasurer, Oscar Stezenso, New York; general manager, James A. Kline, York, Pa. The company expects to double its output of Pullman cars for 1909, when two new models will be marketed—a 30 horsepower touring car at $2,000, and a 20 horsepower runabout at $1,500. All the old models will be continued, save the 20 horsepower touring car.

Stewart Invades New York Market.

The Stewart & Clark Mfg. Co., of Chicago, has established its New York branch in the Motor Mart, 1878 Broadway. A large stock of the Stewart speedometers will be carried, the branch including also facilities for installing the instruments on cars within the premises.

The Week's Incorporations.

Philadelphia, Pa.—Penn Motor Car Co., The, under Delaware laws, with $10,000 capital.

Louisville, Ky.—Louisville Taxicabs Co., The, under Kentucky laws, with $5,000 capital; to operate taximeter cabs. Corporators—John E. Roche, W. G. Coldewey and L. K. Delph.

Waldron, Ill.—Waldron Runabout Mfg. Co., The, under Illinois laws, with $50,000 capital; to manufacture automobiles and accessories. Corporators—E. O. Parker, D. J. Lewis and C. M. Marshall.

Camden, N. J.—Auto Accessories Co., The, under New Jersey laws, with $10,000 capital; to manufacture and deal in automobiles. Corporators—Frank R. Hansell, William F. Erdell and I. C. Clow.

New York City, N. Y.—La Buire Import Co., under New York laws, with $5,000 capital; to deal in automobiles. Corporators—Isaac H. Walker, William M. Walker and Pauline D. Walker, Bayville, L. I.

New York City, N. Y.—Apthrop Motor Car Co., under New York laws, with $50,000 capital. Corporators—M. Taliaferro Lordan and E. Libby, 115 Broadway, New York City; Louis Rosenberg, 50 Pine street, New York City.

Buffalo, N. Y.—Densmore Co., The, under New York laws, with $15,000 capital; to conduct a general automobile business. Corporators—William R. Densmore, Buffalo, N. Y.; Fred Densmore and Frank Sturtevant, Erie, Pa.

Washington, D. C.—Capitol Auto Sight-Seeing Co. (Inc.), with $5,000 to $25,000 capital; to buy, sell and hire automobiles. Corporators—William W. Anderson and Thomas W. Buckley, Washington, D. C.; C. W. Sprague, Philadelphia.

Motor Truck Designed for Varied Use.

The Wisconsin Automobile Supply Co., Two Rivers, Wis., is reported to have finished a motor truck of such new and original design that it will erect a plant at that point and engage in the manufacture of the vehicle on "an extensive scale." It is stated that the vehicle may be employed not only as a truck, but its engine "may be utilized for driving a saw, feed cutter, pump or other machinery."

Ludington "Gives up" for a Factory.

O. A. Starke and William Roth are reported as having raised $75,000 of the $100,000 necessary to bring an automobile factory to Ludington, Mich. The local board of trade has been conducting the negotiations with the promoters, whose names are not given.

Warner Opens Los Angeles Branch.

The Warner Instrument Co. has established a branch in Los Angeles, Cal. It is located at Twelfth and Olive streets.

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ANTI-CHAIN ORDINANCE IS UPSET

New York Supreme Court Declares Unconstitutional Park Rule Forbidding Chains on Tires—Text of Decision.

An important victory was won by the Weed Chain Tire Grip Co., of New York City, this week over the ordinance under which the Commissioner of Parks assumed the power to prohibit the use of tire chains by automobiles on the park roadways, when Justice Davis, in a special term of the Supreme Court, on Tuesday handed down a decision declaring the ordinance unconstitutional. The decision is not only of local effect in restoring to motor car users in New York City their right to use tire chains in the parks, but will have an influence in checking a tendency on the part of park authorities in other cities to emulate the example of the New York park commissioner in barring chains from the park roads.

The case in which the decision was developed was that of Edward Anderson, who was arrested on March 28th last, charged with driving a car in Central Park, near Seventy-second street, with chains on the rear tires. Anderson was convicted, and the matter came before the Supreme Court later on a writ of habeas corpus sworn out by Anderson, backed by the Weed company, who demanded his release from jail on the ground that the ordinance was unconstitutional. Justice Davis upholds Anderson's contention, and points out that the Commissioner is given too arbitrary powers in deciding who may or may not use chains and in prohibiting chains and not other types of non-skid devices.

The ordinance, which has been vigorously opposed by the Weed company and by automobilists generally from the time that it went into effect—December 13, 1907—had its origin as a rule of the Board of Parks, and by virtue of section 610 of the Charter, became an ordinance through the filing of a certified copy of the rule with the city clerk. It reads as follows:

"No automobile or horseless or other vehicle wearing chains over the tires of their wheels shall enter the public parks or traffic roads under the jurisdiction of the Board of Parks without permission of the commissioner having jurisdiction."

In the course of his decision Justice Davis says:

"It will be observed that the ordinance confers upon the Commissioner the power to allow some vehicles to use chains while denying permission to others. No restriction is placed upon his action in this respect and he is bound by no rule. The owner against whom such discrimination is made has no redress. He must submit without appeal to the arbitrary denial of a privilege which others of his class are allowed to enjoy through the favor of the Commissioner."

The Court also says in pointing out the defects in the ordinance:

"What claims are to be permitted and what prohibited under this ordinance, what individuals are to be favored and who are to be denied the right to enter the parks, depends upon the mere will of the Commissioner. It is a vital defect in the ordinance that it contains no provision guaranteeing uniformity in its enforcement. No rule or principle is provided to secure its impartial execution.

"Inequality," adds the Court, "in its enforcement is thus not only possible, but probable, and so it fails to insure equal protection to all persons similarly situated, and for this reason is unconstitutional. . . . . Further analysis of this ordinance serves only to emphasize its unconstitutionality. The evidence shows that there are several kinds of anti-skidding equipments in common use, but the chain is the only one condemned by the ordinance. Why the owners of the chain device should be put in one class and those using the other devices in another and exempt class is not at all clear. All of these various methods of preventing skidding are equally bad for the roadbeds so far as we can judge from an examination of the exhibits, but there is nothing in the evidence to warrant the conclusion that the chain is more injurious than the other methods. Indeed, one fails to discover any reasonable basis or principle whatever justifying the placing of the chain method in a prohibited class by itself.

"It follows, therefore, that the ordinance makes an unlawful discrimination against those who use chains as part of their vehicle's equipment. All owners of vehicles equipped with an anti-skidding device—that is, all owners similarly situated are not equal before this law. Some may use the park highways freely, while others may not unless they get the Commissioner's permission. Thus the latter are denied the equal protection of the laws and their constitutional rights are invaded.

"It had been raining hard," the Court continues, in relation to Anderson's arrest, "and at this time it was drizzling and the roadbed was wet, muddy and slimy. Under these circumstances the relator was arrested and convicted. These chains were used by Anderson to prevent skidding. It appears from the testimony before the learned magistrate that the automobile is practically useless and really dangerous under these circumstances unless some kind of anti-skidding device is used on its rear wheels."

Jeffery Again Adds to His Plant.

The seventh annual addition to the Rambler factory at Kenosha, Wis., is about to be made by Thomas B. Jeffery & Co. Ground is being broken for a solid concrete building 257 feet by 150 feet, making a total of 38,500 square feet of floor space to be added. The new building will be used by the final test department. Every year of the past seven has seen some large addition to what the Rambler people now claim is the largest automobile factory in the world.

Quinby to Sell Cars in New York.

J. N. Quinby & Co., the Newark (N. J.) body builders, are preparing to open a salesroom in New York and engage more actively in the sale of complete cars. To that end they have taken the agency for the Pennsylvania car for northern New Jersey, New York City and vicinity; their initial order calls for 150 cars.

CHAIRMAN POPE ON RIM SITUATION

Head of A. L. A. M. Tire Committee Explains Its Attitude—Says Final Action has not been Taken.

The doubt and confusion existing regarding the rim situation, has induced A. L. Pope, chairman of the Association of Licensed Automobile Manufacturers' tire committee, to issue a full statement bearing on the subject.

"It is quite true that the Mechanical Branch of the Licensed Association has given much time and thought for a year and more, to the question of a uniform design that could be universally used by those desiring quick detachable rims; in fact, by the beginning of August last they had selected from types which came to their attention, a form which at the time seemed to them to suit all requirements," he says.

"In order to bring about a definite adoption by the vehicle makers as represented by the several associations, if possible, of one type, the engineers expressed their approval of a form which was then before them. Such approval was a necessary step in the progress of standardization, and though an important step, was obviously entirely subject to the final adoption contingent upon other than mechanical questions.

"It is hardly to be expected that the Licensed Association as a body, with the far reaching influence that its actions necessarily have, would take precipitate action. They have not as yet taken any action specifically adopting any particular type of quick detachable rim.

"Interested parties may rest assured that the matter is receiving most thorough consideration and careful study, and that whatever the final action may be, the rim adopted will be the type most suitable from every standpoint that can be properly considered."

National Battery in New Hands.

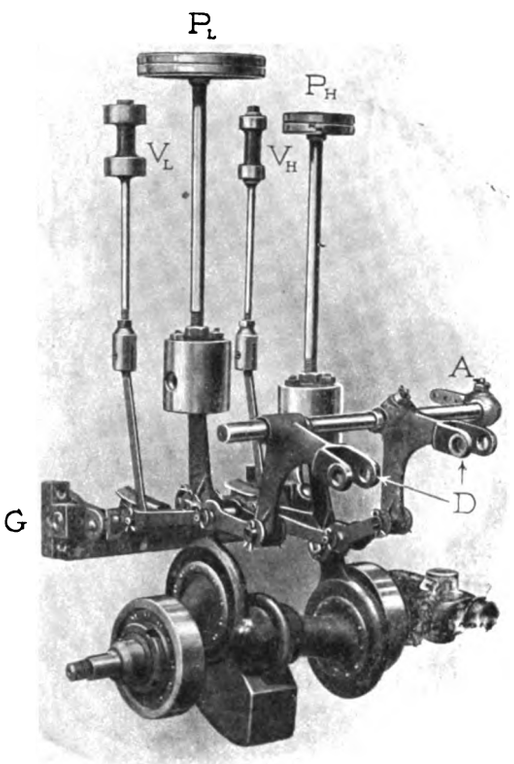
All claims against the National Battery Co., of Buffalo, which went into the hands of a receiver in February last, having been settled, the entire property has been restored to the stockholders. Full control of the reorganized company has been secured by the Cutler-Hammer Mfg. Co., of Milwaukee, well known as makers of electrical apparatus. The plant of the National Battery Co. will remain at Buffalo but the business will be conducted under new management and with ample capital.

Meteor Drops into Michigan Avenue.

The Meteor Motor Car Co., of Bettendorf, Iowa, has opened a branch at 1233 Michigan avenue, Chicago. The Meteor people began delivering their 1909 models thirty days ago.

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The Simplicity of
THE WHITE STEAM CAR



In the accompanying illustration are shown the working parts of the 1909 White steam engine. First of all will be noted the assembled crank-shaft which we showed, part by part, in last week's advertisement. Next we call attention to the high-pressure piston, P_H, and the low-pressure piston, P_L. Each stroke of each piston, up or down, is a working stroke. It will thus be seen that, as regards continuous application of power, the two-cylinder White engine is equivalent to an eight-cylinder gasolene engine of the usual four-cylinder type.

The valve construction of the White engine is of extreme simplicity. There is but one valve for each cylinder, V_H being the valve for the high-pressure cylinder and V_L the valve for the low-pressure cylinder. The valves are of the balanced type—that is, the steam pressure is the same on opposite sides. Therefore, the valves do not work against pressure and the power needed to operate them is practically nothing. The valves are driven from the connecting rods by means of levers, as shown in the illustration. The engine is reversed and the "cut off" is altered by simply tilting the guide G. Those who are familiar with the valve mechanism of the gasoline engine will appreciate that the White construction is by far the simpler.

Write for circular containing details of the new White cars.

THE WHITE COMPANY

CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St.
BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St.
PITTSBURG, 138-48 Beatty St.
CLEVELAND, 407 Rockwell Ave.
CHICAGO, 240 Michigan Ave.
SAN FRANCISCO, 1460 Market St.
ATLANTA, 120-122 Marietta St.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, SEPTEMBER 17, 1908.

The Subject of Crank Shafts.

In connection with the development of new models which are destined to figure on the market next year, it is noticeable that in not a few instances the refining process has been signalized by the use of larger crank shafts than heretofore and longer bearing surfaces. In itself this may not appear to be of material significance, even supposing it to occur in a large number of instances. But when it is considered that crank shaft trouble in the past has not been a common ailment with motors of the better class—indeed, that broken shafts or siezed bearings have been rather conspicuous by their absence, it is apparent that a deeper significance attaches to the change than would be the case were it supposed to indicate a desire on the part of the makers to rectify any purely apparent evil. Indeed, the reason back of the change is one which is actually of considerable importance and the concrete token of its appreciation is much to the credit of the more up-to-date class of designers.

Bearing in mind that the maker's effort is being concentrated chiefly upon the silencing of the motor and prolongation of its life at the present time, it is not difficult to find a clue to the secret behind the use of the enlarged crank shaft. That organ is forced to receive the full force of the explosions and to transmit and transform the motion imparted to it to the gears. It is thus perhaps the hardest worked element in the entire machine. Upon its rigidity depends in large measure the stability of the machine and its freedom from vibration—that most destructive of all evils. Buckling or yielding to torsional stresses introduces an element of recoil and so of vibration into the motor. Unless this is combatted properly the life of the bearings, as well as the safety of the part itself is greatly endangered.

The first significant development in the way of strengthening up the crank shaft came with the introduction of the high-grade, heat treated "automobile" steels, within a year or two. At first it was thought that this would bring about the desired effect, and because of the greater tenacity of the new materials as compared with those which they superceded, there was a tendency rather to decrease their size, or at least to keep it constant despite slight increases in power. Then a curious and wholly novel development of the close study to which the metals have been subjected was brought to light. It was found that the amplitude of vibrations was practically constant with the size of the piece, regardless of the quality of metal under test—always referring to the better grades of steel.

That is to say, a shaft revolving under combined twisting and cross stresses would tend to yield by about the same amount whether composed of the most popular high-grade metal or of the more ordinary grades such have been in use for some little time. This means in a word, that despite the advantages of the newer metals in the matter of ultimate strength and of endurance—which are unquestionable—they do not serve the expected purpose in reducing vibration. Hence it is necessary to increase diameters, and also, for the sake of increasing the support of the shafts and further safeguarding against the same evil, to increase the length of bearing surfaces.

This development is by no means a general one, but so far as may be determined, it is sufficiently marked to constitute what around show time is fondly termed a trend. Its results will be observable in improved running, freedom from jar and longer life of parts and in lower repair bills. For in reducing vibration and increasing the staunchness of the motor, the durability of all its parts must be corespondingly improved.

Importance of Cost Keeping.

Only by improved methods of construction and the application of all that is most modern in factory usage has it been possible for the present day automobile makers to produce the excellent types of car now on the market at costs which, all things considered, present a high value for the money invested. This modernizing of factory conditions requires the most rigid economy in every respect and the closest possible methods of accounting. At the same time, there are many plants in which that absolute barometer of internal conditions in the shop—the cost sheet, is rather lightly held, or at least regarded as a very modern and ornamental "frill" which is by no means an essential to the successful conduct of the business. In fact, many a maker is quite as much concerned in learning how much it costs to learn how much its costs to produce a given component, as he is in ascertaining the actual dollar's worth of the finished part after it has passed the various departments and come to rest on the shipping platform. Yet, as some one has said, the cost book should be the manufacturer's Bible and there is more virtue in the idea than at first may appear.

Where it is known exactly how much time is required for the production of every finished part, where the relative lengths of the various steps in its production are known, and where the time-keeping system is sufficiently exacting to determine automatically any discrepancies in the production of a long series of duplicate parts, the first step toward rapid and accurate manufacture has been taken. This knowledge permits a successful planning of the output from the beginning up to the conclusion of the season, instead of from its middle to a hurried close; it permits a successful "routing" of the product from one end of the plant to the other, and a close balancing of the various corelated steps so that no one department shall run ahead of or fall behind the others. Such a system once es-

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tablished and records made, preserves an automatic check on the occupation of every foreman and every mechanic and at once indicates any laxity or carelessness, or even pointing directly to the source of difficulty.

The money side of the cost system exercises in some respects a counter check on the time element, but it has its own peculiar importance in keeping track of sundry other items such as general and overhead expense, which, while nominally of only contingent value, yet are of tremendous significance in determining the swing of the balance sheet. The accurate accounting of the disposition of all materials, furnishing a check on wastes of stock as the time furnishes a check on the waste of possible effort, is readily looked after in this way, while the grand totals supply a constant inventory of the business in that particular department which is invaluable.

Many methods of cost accounting are too cumbersome and expensive to be of a really profitable nature. Others are too lax or inefficient, to be worth their cost. Still others of either type, may be too loosely administered to be of material benefit to the business. The cost department, however, must be considered as an essential element of any creative undertaking. As such, the first consideration governing it should be its efficiency. Following that its economy should be taken into account. It is in no sense an extravagance when properly proportioned to the enterprise which it supervises and if successfully carried through must earn its upkeep as truly as does any other department. All this is very well understood in many instances, but in others, and to a surprising degree, cost keeping still is regarded in the old-school light of a needless bit of luxury.

Hopelessness of Horsepower Formulae.

By the terms of a rather formidable algebraic expression the Society of Motor Manufacturers and Traders of Great Britain has at length arrived at a new method of expressing the probable power output of an internal combustion motor. Going a step further than has been done before, they also propose its use for purposes of competition as well as for the general purposes of a horsepower formula of every day utility. A comparison of the results which it furnishes and those supplied by the only formula recognized in this country, as well as the ratings assigned by the respective makers to their own products, makes it appear that the result is not altogether satisfactory, even though in many instances the ratings seem to be nearer the actual power of the motors than those derivable from either of the other two sources.

Even a hint at the abstruse contents of the voluminous report which accompanies the suggested formula is in itself instructive as showing something of the hopelessness of attempting to place all motors on the same footing by means of a common horsepower formula. The processes by which the designer is enabled to forecast the power of a motor are too complex to bear reduction to simple terms; the methods of calculating the theoretical power of an existing motor are similarly involved. The simple expression inevitably must be a compromise in which certain assumptions are covered by the use of constants. Such expressions may be made to serve a useful and enlightening purpose in comparing motors of similar design, but they cannot be relied upon when it comes to rating a number of machines of widely divergent characteristics which are to be run together in competition. Indeed, the invariable result of operating competitions on such a basis is to develop freak designs or at least which tend to become freakish as the formula exaggerates one feature of construction or another, or places a premium upon certain phases of design.

In addition to its absolutely unsatisfactory nature in general, then, the tendency of laying too much stress on competition formulas is unwholesome, since it tends to fetter the designer, confining his attention to certain narrow lines of development. It inclines toward stagnation, since the results of successful competition models are apt to be embodied in stock cars of later development, and utterly removes from the racing propaganda that useful feature which has been so much emphasized by its advocates in the past—its educational advantages.

Whatever may be the objections to the new formula in regard to its possible utility for either of its two purposes, it has however, this merit, that it in a measure reveals a great discrepancy in the older and simpler expression. Comparing the rated outputs of motors having the same cylinder diameters but different strokes, a considerable difference in power is observable. That the A. L. A. M. formula expresses correctly the average output of engines of given bore, designed along the best accepted lines in regard to piston speed and ratio of bore to stroke does not follow, as is apparent when a number of cases are considered. For a number of exceptions are discoverable in the cases of machines of unquestionable repute. At the same time, covering as it does, a majority of motors with fair approximation to what may be determined by calculation to be the correct power figure, it is beyond question the best expression of the sort that has yet been advanced. Certainly the proposed substitute cannot be expected to find ready acceptance because of the element of possible error introduced by the constant, and its suggested variation to suit different types of motor. That in itself is enough to condemn it. Why designers and builders will persist in adhering to elastic and variable methods of rating instead of establishing a rigid and inflexible basis such as piston displacement, is almost beyond comprehension.

COMING EVENTS

September 20, San Francisco, Cal.—Olympic Athletic Club's race meet at Tanforan Park.

September 20-30—Kansas City Automobile Club's endurance run, Kansas City, Mo., to Oklahoma City, Okla., and return.

September 23-24, New York City.—Dust trials, smokeless exhaust and brake tests, under auspices of New York Automobile Trade Association, Central Park.

September 23-24, Boston, Mass.—Bay State Automobile Association's 24 hours endurance run, Boston to Bretton Woods, N. H.

October 6-9, Chicago, Ill.—Chicago Motor Club's 1,000 miles reliability run.

October 7, Philadelphia, Pa.—Quaker City Motor Club's 200 miles road race, Fairmount Park.

October 10, Lond Island—Motor Parkway Sweepstakes.

October 17, Hartford, Conn.—Automobile Club of Hartford's hill climb, Avon Mountain.

October 24, Long Island.—Vanderbilt cup contest.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

January 23-30, Philadelphia, Pa.—Philadelphia Automobile Trade Association's annual show.

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RECORD THAT GOES FOR NAUGHT

Winners of "Outlaw" 24 Hours Race Cover 1,107 Miles, Great Throng Attending —Roosevelt's Name Misused.

Ralph Mulford and Harry Cobe, driving a Continental-tired six-cylinder Lozier car rated at 50 horsepower, won the Motor Racing Association's "outlaw" 24 hours' race, which finished on the Brighton Beach track, near New York City, about 11 o'clock Saturday night last, 12th inst. Incidentally they set up a new 24 hours team record, covering in that time 1,107 miles, which, however, being made under outlaw auspices, unfortunately cannot be placed in the record tables—one of the many penalties of outlawry. Another Lozier car, manned by Michener and Lynch, finished in second position with 1,092 miles, and a Fiat car with Capra and Parker in charge, was third, with a total mileage of 1,074. Eight of the nine finishers had covered more than 900 miles each when the gun brought the contest to an end.

Due to the able assistance of the well-trained battery of metropolitan "auto-editors," who act as god-fathers to the outlaw Motor Racing Association, an immense crowd, variously estimated at from 15,000 to 20,000, witnessed the meet. Miles of advance publicity, lurid in detail, telling of the "bitter war" between the Motor Racing Association and the American Automobile Association—the former having promoted the meet without the formality of applying to the latter for a sanction—made it appear that there would be a pitched battle at the scene of the race meet. The public probably expected to see the belligerents pouring broadsides of shrapnel into each other, or at least a pitched battle of the fists.

Therefore, a goodly portion of the population of Greater New York and Hoboken fell all over themselves to get to the Brighton Beach track and see the expected fight. They came in such hordes that Tom Moore, the major domo of the affair, decided that the picking was too easy. He could not resist the itching palm and played fair (!) with the public by marking up the price of admission 50 cents and $1 early Friday evening and then when the tickets ran out, the promoters had to break open the ticket boxes and resell the bits of pasteboard to a lineup longer than wanted to see the two "Devils" on opening night. This occurred after Moore became greatly distressed by the sight of several gatekeepers accepting real money in lieu of tickets.

It had been given out before the meet that the governing body—the American Automobile Association—would suspend all drivers from future sanctioned contests if they participated in the unsanctioned, and therefore "outlaw" meet. At the eleventh hour, Louis Strang, who has won three sanctioned road races this year, grew nervous and "nervy," and applied for a special dispensation from the governing body. He wanted immunity; naturally, he didn't get it.

The banner of the Motor Racing Association and of "outlawry" was unfurled to the breezes at 3 o'clock Friday afternoon, when a card of short races was run, though under some difficulties. Naturally, it is a very "interesting" sight to see one car leading another around and around. That is what occurred in every competitive event. The first was a five miles race for gasolene cars and Ray Howard (Palmer-Singer), and F. J. Davis (Moon), breasted the tape. The "race" was a procession with Howard showing the way until the finish. Time, 5:11⅘. The second race at 10 miles for cars selling at $4,00 or over, also had the large number of two starters. J. B. Marquis (Stearns), won easily from George Schienick (Renault) in 10:51⅗.

The match between Ralph De Palma (Fiat), and R. C. Buckley, in the B. L. M. car that was built for the last Vanderbilt race, but which did not get as far as the starting point in the elimination, was all De Palma's from the start. He finished in 5:11⅘. The principal event of the afternoon had more than two starters, but only that many finishers. Rippingill (Allen-Kingston) had a mishap early in the race and a puncture put Ray Howard (Palmer-Singer) out of the running in the 37th mile. This left only Laurent Grosso (Stearns) and F. J. Davis (Moon) in the race and the former finished in 55:08, 23 seconds in front of his competitor.



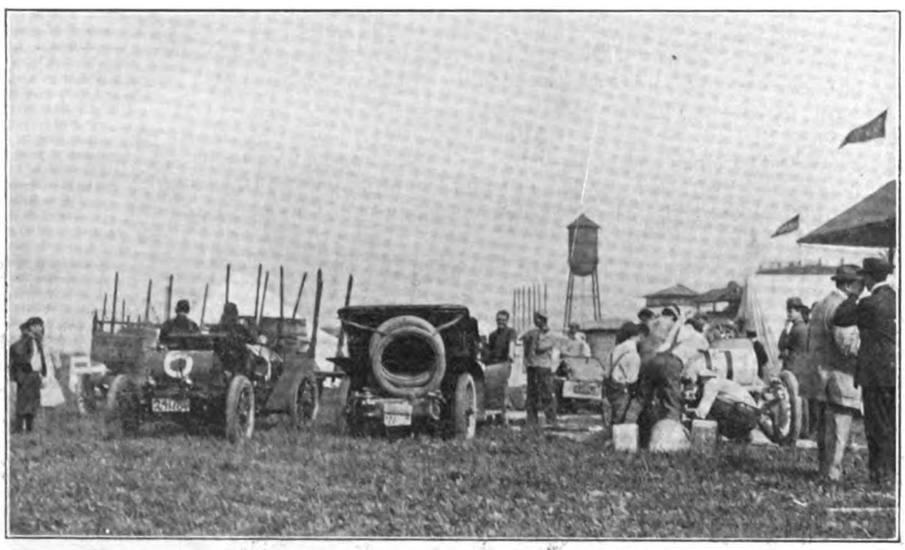
NIGHT SCENE DURING THE BRIGHTON BEACH 24 HOURS RACE

The old Brighton Beach track never held more people—even in its hey-dey of horse racing—than it did when the 24 hours race started at 8:30 o'clock Friday night. The grand and field stands were packed and jammed with humanity while all the available parking spaces were soon filled with cars.

The "outlaw" gentlemen stopped at nothing to attract a "gate." They went so far as to announce that President Roosevelt himself would start the race by telephone from Oyster Bay; and it did start when an alleged telephone message was received. The next afternoon a man who remotely resembles the President, was at the grounds and he was pointed out to inquirers as the Chief Executive. Of course, the announcement was a fraud pure and simple. Now that

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the Motor World fancied for a moment that the President would give prestige to an outlaw meet by lending it his presence or his name, but as a matter of form an inquiry was dispatched to Oyster Bay. As expected, it brought a prompt denial from Secretary Loeb. The President was not at the "outlaw" automobile meet and neither did he lend assistance by telephoning, or by authorizing the use of his name in connection with it.



SCENE IN THE SUPPLY CAMPS

Automobile racing at night is the same the world over. It is spectacular to see half a dozen or more cars rushing around a circular track, which is almost obscured by darkness except for the line of lights dotting the infield fence. All the spectator sees of a car on the backstretch is two calcium lights piercing a way through the wall of darkness. So far as the stage setting goes, the Brighton Beach 24 hours race last Friday and Saturday was no different from others that have been held except that perhaps the pace was a bit faster. There were the camps of the competitors in the infield, with attendants scurrying about with supplies for the car, and refreshment for the tired drivers, the eager but sleepy crowd in the stands always waiting like vultures for a killing. Happily there was none. The nearest semblance to it and one of the few thrills of the meet was in the second hour, when Sartori in the Renault car, plunged through the inside fence at the beginning of the turn out of the backstretch.

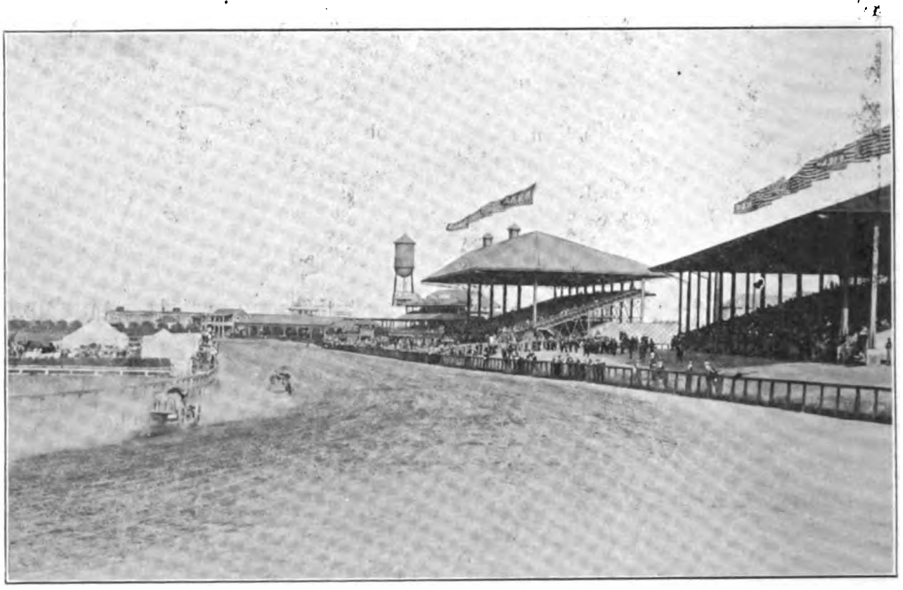
Sartori enjoys the distinction of having put as many cars out of races through his own recklessness as any other driver, but for once, he couldn't very well help it. The little S. P. O., a stripped taxicab, was going slowly around the turn when Sartori came rushing up from behind just as it closed in on the pole. Sartori jammed on his brakes and tried to squeeze through on the pole, but an unfriendly fence post interferred. The car upset and Sartori and his mechanic, Gourand, were thrown out. The driver had several ribs, his shoulder blade and right arm broken, besides contusions, but the mechanic got off with less injury to himself. Both men were taken to the Coney Island hospital, and later removed to a private sanitarium in New York, where both are reported as doing well..

At the ending of the first hour Michener and Lynch, in the four-cylinder Lozier, led the other Lozier by a short distance, each having covered 48 miles. The Fiat, Allen-Kingston, Stearns and Renault cars were fighting it out for third place with 46 miles apiece, while the Simplex car, driven by Robertson and Lescault, had reeled off 45 miles. The Thomas, Acme, S. P. O., and Garford cars were some distance behind. There was a change in the second hour when Michener and Lynch, twice lapped their team mate. By good driving Robertson and Lescault (Simplex), and Rippingill and De Palma (Allen-Kingston) brought their cars up to the Lozier, each having 101 miles. It was shortly after the second hour that Sartori met with his accident.

Robertson's run of 56 miles in the second hour was the feature of the early part of the race and it enabled him to nose out in front at the ending of the third hour, with a score of 146 miles. At that time Rippingill, in the Allen-Kingston, was in second place with 143 miles, and Michener's and Lynch's Lozier had covered 142 miles. The Fiat was third and the other Lozier fourth. Robertson maintained the lead until the end of six hours, when a cracked cylinder kept his car off the track for more than two hours while it was being replaced. At the finish of the 6th hour he had covered 294 miles. The Allen-Kingston was then second, with 284 miles, and the two Loziers, the Fiat and the Stearns a few miles behind in the order named.

The mishap to the Simplex gave the other cars an opportunity to change positions and the Allen-Kingston assumed the lead, which it held until after the 9th hour, the score for the leader being 423 miles. It succumbed at that time and Mulford (Lozier) and Capra (Fiat) stepped into first and second positions. The Lozier was 8 miles ahead of the old record and the Fiat five miles.

This order was maintained at the ending of the 11th hour, but Mulford's Lozier had again caught its pace and was pushing the Fiat hard for second place. For three hours more there was no change, but Mulford was drawing up on Capra all the time. In the 16th hour the Fiat had tire trouble and stopped for some time, which enabled the second Lozier to scramble into second place, behind its factory mate. The Fiat car had been having trouble all night with its lamps and had to stop many times to have them relighted. At the 17th hour Mulford had 22 miles lead on his team mate, who drew a lead of 10 miles on the



GENERAL VIEW OF TRACK AND STANDS

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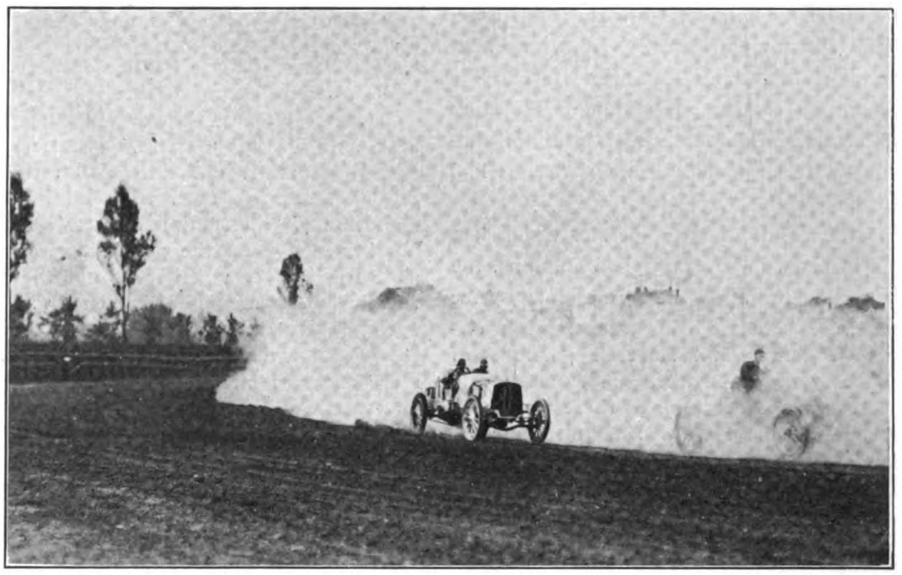
Fiat. The Stearns and Allen-Kingston were fighting it out 25 miles behind the Fiat.

Robertson's great driving on Saturday night, to make up the lost distance, was the one big feature of the race. In the course of it he covered 105 miles in two hours, miles after miles being rolled off in 63 and 64 seconds. The crowd was quick to apreciate Robertson's efforts and he got a cheer each time he passed the stands. He cut down the lead of Mulford by 20 miles and gained on all the others. Mulford still led his team mate by 14 miles although he had to stop for a time on account of tire trouble and only made 34 miles in the 17th hour. Michener's Lozier and the Fiat were in the same relative positions while the Stearns had pulled up even with the Allen-Kingston in fourth place.

The closing hours did not result in any material change. Drivers were replaced in order to save the cracks for the final hour, and Lescault, who had been having trouble with his eyes, lost several miles which Robertson later had to gain. Mulford's Lozier passed the 1,000 miles mark in the 22d hour, the other Lozier reaching that distance a few minutes before the ending of the hour. The leading Lozier covered 46 miles in the 23d hour and made one mile more than that in the last hour. Robertson made two miles more in the last hour than did De Palma and thereby landed his car in fifth position almost at the last minute.

Although the splendid mileage made by the winning car is a record for 24 hours, in that time 1,107 miles having been covered against the old record of 1,079 miles, as stated, it cannot, of course, properly stand as a record, as it was made at an unsanctioned meet. Also the 24 hours were made in two instalments as the race was stopped more than two hours Saturday afternoon to allow the track to be scraped and rolled. The track was supposed to have been rendered dustless, but after the first few hours, it was as bad as an unimproved country road.

Just what is the 24 hours record no one seems to know and there also is held to be a distinction between one-man records and those made where the drivers alternate. The National car is believed to hold the record made with one man driving, while the Brighton Beach cars had two drivers. The records for this kind of a race were gotten inside of from the fourth hour, the distance for five hours being 245 miles by Robertson, agaainst the old record of 237 miles. Robertson led at the ending of the sixth hour, covering 294 miles, eight miles better than the revious record. DePalma led for the 7th, 8th and 9th hours, when Mulford forged ahead and from then on was never headed, so that the records for the succeeding hours go to his credit. At 12 hours he had covered 565 miles, 12 miles better than the previous two-man figures, and at 18 hours he was 23 miles ahead when he covered 849 miles. The previous record for 24 hours is given at 1,079 miles, so that Mulford added 28 miles to the score when he reeled off 1,107 miles in a chronological day.



SHOWING HOW THE DUST PREVENTIVE PERFORMED ITS WORK

Having found how easy it is to "get away with it," the Motor Racing Association intends to get another slice of the public's money by holding a second 24 hours race at Brighton Beach track on Friday and Saturday, October 2 and 3. As the outlaws do not think two drivers per car are sufficient, they propose to permit another one.

Paul La Croix's challenge to any car beating the old Renault 24 hours record to meet one of his Renault cars in a matched race, has been accepted by Charles A. Singer. Basing his claim upon the fact that his Simplex car ran ahead of record time until it cracked a cylinder, Mr. Singer believes the challenge ought to apply to the Simplex.

SUMMARY OF THE BRIGHTON BEACH 24 HOURS RACE.

	Driver and Car.	1	2	3	4	5	6	7	8	9	10	11	12
1	Mulford and Cobe, Lozier	48	99	137	185	232	279	320	371	417	465	515	565
2	Michener and Lynch, Lozier	48	101	142	191	239	275	312	359	406	458	504	552
3	Capra and Parker, Fiat	46	99	139	184	230	273	312	364	411	462	506	556
4	Laurent and Marquis, Stearns	46	97	136	184	231	270	313	353	398	433	474	522
5	Robertson and Lescault, Simplex	45	101	146	193	245	294	296	296	310	361	413	460
6	Rippigill and De Palma, A-K	46	101	143	192	235	284	332	380	423	430	478	522
7	Strang and Rodgers, Acme	29	42	65	108	157	194	240	289	332	375	418	465
8	Roberts and Martin, Thomas	40	86	122	162	203	237	278	316	356	396	437	478
9	Kjeldsen and Juhasz, S. P. O	36	55	55	55	55	60	98	130	166	202	243	278
	Vantine and Daty, Garford	33	33	41	54	83	83	83	83	83	83	93	138
	Sartori and Clement, Renault	45	64	Ran into fence and retired.									

	Driver and Car.	13	14	15	16	17	18	19	20	21	22	23	24
1	Mulford and Cobe, Lozier	616	664	706	755	803	849	883	920	972	1,016	1,060	1,107
2	Michener and Lynch, Lozier	601	646	691	740	781	825	870	914	960	1,005	1,048	1,092
3	Capra and Parker, Fiat	605	650	693	724	771	815	862	907	950	993	1,039	1,074
4	Laurent and Marquis, Stearns	570	620	659	701	746	784	835	880	923	966	1,008	1,050
5	Robertson and Lescault, Simplex	505	553	599	647	695	746	800	846	892	938	982	1,029
6	Rippigill and De Palma, A-K	570	619	657	699	745	789	835	865	906	932	982	1,027
7	Strang and Rodgers, Acme	514	557	591	631	676	703	749	792	835	879	927	976
8	Roberts and Martin, Thomas	518	561	605	651	691	728	768	804	840	877	918	955
9	Kjeldsen and Juhasz, S. P. O	313	351	389	402	413	443	483	511	533	569	602	635
	Vantine and Daty, Garford	183	224	263	303	318	318	323	344	375	387	...	...
	Sartori and Clement, Renault												

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"TREATY OF PEACE" IS SIGNED

Compromisers Settle A. C. A.-A. A. A. Controversy, but not all Conditions are Made Public—Savannah's Pop-up.

The "war" is over—for the time being, at least. The Automobile Club of America has "saved its face" and the banners of all Europe, which it wrapped around itself and so nobly defended, now are fluttering proudly, if not patriotically, from its American flagstaffs. The American Automobile Association retains possession of the stars and stripes, which, however, are not fluttering quite so proudly as their friends had hoped.

As the result of gutta percha which had been inserted in several spinal columns, the compromisers and the peace-at-any-price men were able to bring the warring elements together and selected portions of the treaty of peace were made public late last evening. According to these terms the A. C. A. will have control of "international races" and the A. A. A. of national events. Each in turn will help the other to make successes, first of the A. A. A. Vanderbilt cup race and then of the A. C. A. Grand Prize race at Savannah. After this year, an "independent racing association" will take charge of both events, the Vanderbilt cup race becoming a national event.

The official announcement of the settlement of the disturbance is as follows:

"Conference committees representing the American Automobile Association and the Automobile Club of America, have for several days been negotiating a settlement of differences between these bodies. These committees finally reached a conclusion, which was ratified by the board of governors of the club a few days ago, and by the executive committee of the association at an adjourned meeting held to-day.

"The understanding disposes of the controversy and establishes friendly relations.

"It is agreed that the Automobile Club of America is the only American member of the International Association of Recognized Automobile Clubs, and that it is and shall be the only authority in America for the drafting of rules affecting and for the granting of sanctions for international races, and for the regulation of such races in this country. On the other hand, the matter of the sanction of and the formulation of rules for local and national races is agreed to be, as heretofore, in the sole power and jurisdiction of the Association. The two bodies agree to co-operate with each other in making the Vanderbilt cup race and the Savannah Grand Prize race successes. After the races of this year, the two cups are to be deeded to an independent racing association, and are to be contested for annually, the Grand Prize Cup as the international trophy, and the Vanderbilt cup as the national trophy. It is also agreed that the club shall not encourage other clubs to withdraw from the American Automobile Association.

"The essential points at issue between the two organizations have thus been settled and their co-operation in the future in all matters relating to the sport of automobile racing is assured."

These statements were signed by Robert P. Hooper and Charles T. Terry, representing the A. A. A., and Henry Sanderson and W. G. McAdoo, representing the A. C. A. None of these gentlemen previously had figured in racing affairs.

These statements, however, by no means represent the full text of the settlement.

It is generally understood that the conditions that have been withheld include a definition of "international races," and lacking knowledge on the point, it is not possible to discover whether or not the peace that has been arranged does not make for even greater future complications and controversies, which easily are possible if the mere entry of one or more foreign cars in an American event shill be held to constitute an international race. Making the Vanderbilt cup race a purely American event is a wise move and assures its continuance; for with the rapid disappearance of the foreign car from these shores, there also will disappear everything in the nature of what truly may be styled an international race.

The provision for the formation of an "independent racing association" to conduct the Vanderbilt and the Grand Prize races of the future is evidence of the sore straits to which the compromisers were reduced in order to reach an agreement. How, where or by whom the two-race association will be formed is a matter of interesting conjecture.

By those who profess to be in position to know, it is stated that the terms of peace as arranged also provide that the "outlaws" who had their hands in the Brighton Beach 24 hours race last week shall be "taken care of" and "let down easily."

None of those actually in position to know what transpired at the peace conferences will give any further information than that officially made public. Another and fuller official statement will be made within the next few days.

Early in the week gaiety was added to the situation by the A. C. A.'s "man Friday," the Savannah Automobile Club, which issued a call for a convention of clubs at Savannah in November at which a new national organization would be formed. It was known that the Savannah club was growing nervous over the poor prospects for the Grand Prize foreign car race, and whether its call was due to "nerves" and a desire to attract a crowd, or was inspired by the A. C. A., is not wholly clear; however, few seriously accepted its action. In fact, a Boston club man of prominence who was in New York last week, remarked that outside of the metropolis the whole controversy was viewed as a purely local affair; few outside of the big city, he stated, considered the Automobile Club of America as being worthy of more than local consideration and few cared what it did. A Philadelphia newspaper visitor said practically the same thing and added that if the A. A. A. temporized with the "outlaws" and did not give them a stern taste of discipline, he himself would take up cudgels against national body.

Ocean Boulevard Would be Unholy.

Disapproval of the contemplated $400,000 ocean-skirting boulevard in New Jersey, having its northern terminus with the parkway roads of New York City and its southern end in Philadelphia, has arisen in Ocean Grove, N. J., because of the prospect of automobiles and other vehicles passing through that holy place on Sundays. At a recent banquet of the ushers of the Ocean Grove auditorium, Bishop Wilson, of Philadelphia, declared that it was by no means right that such a boulevard should pass through Ocean Grove as the place had been closed to vehicles on Sundays for years and years, and if the New Jersey legislature should decide on the project, it should have enough respect for the local religious traditions to make the boulevard run far back of the town so that the Sabbath peace should not be disturbed.

Would Whistle Their Own Guilt.

Among the latest proposals for automatically curbing the speeding of Paris taximeter cabs, is that the vehicles be fitted with centrifugal siren whistles which will only come into action when a certain predetermined speed has been attained. The whistle would be installed and sealed under official supervision, and its sounding would quickly call attention to offenders. When the cabs would go outside the fortification limits, into the country, the law provides for the whistle's removal by the officials.

Motor Cars for Prayer Meetings.

Automobile prayer services constitute a Philadelphia innovation which will bring to that city the credit of evangelical enterprise, at least, despite all impressions as to the Quaker City's proverbial moderation of activity. At a conference of the Y. M. C. A. workers of Philadelphia it was decided that motor cars could be employed to good advantage in holding outdoor meetings at various points, and accordingly they will be used this fall.

Back Their Views with Real Money.

To show that its members are earnest in their desire for good roads and are willing to do their share to bring them about, the Automobile Club of Glens Falls, N. Y., at its last meeting voted $200 toward repairing the Glens Falls-Lake George State road. If further financial aid can be obtained the road will be put in exemplary condition.

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HANCOCK CAPTURES FOUR FIRSTS

Chicopee Man Proves the Biggest Winner on Wilbraham Mountain—Fast Going up a Measured Mile.

When the Springfield (Mass.) Automobile Club held its hill climb on Wilbraham Mountain, Friday last, 12th inst., algebra, trigonometry and slide rules did not have to be employed to determine the winners of the twenty events. Instead of calculating winners by formula, the car that made the fastest time in its class won without any further fol de rol or cube root pyrotechnics and the spectators, therefore, instantly were able to note the winners.

The afternoon saw many notable performances and sensational ascents, most of the honors going to the Stevens-Duryea and Knox cars, which were splendidly handled. Charles Basle in a 48 horsepower Knox scored the best time of the day in the event open to all gasolene cars, covering the mile in 1:08, while the Stevens-Duryea performed most astonishingly by winning first prize in every event in which they ran. This included four victories in competition, while a "Big Six" running in a field by itself with no others desiring to enter, scored the fastest time made in any strictly stock car event, 1:09⅘. Robinson, who drove this car, made a most thrilling ascent, skidding a great deal.

William Bourque, in a Knox "30" made second best time of the day, covering the measured up hill mile in 1:09⅗. In this class he beat L. F. N. Baldwin's Stanley steamer by a good margin. Robinson's Stevens tied with Bourque for third best time of the day, with a 1:09⅘ score, Robinson making that time in a stock chassis class and Bourque in an open event. Hancock did good work with Stevens-Duryea entries, scoring three firsts in the earlier trials, and E. Cameron won two of the light car events with a Cameron car.

To add to the day's sensations was a bad accident. P. J. Robinson had just made several good climbs and was making a supreme effort to outdo himself, when his car's outside wheels slewed and struck a large boulder on the roadside. The driver was thrown high into the air and landed among a clump of bushes on a rock pile. The car continued on its way for more than 100 yards, and hit two spectators before it turned turtle and smashed completely. Robinson sustained a compound fracture of the right leg, while the others were only slightly cut.

Apart from the cars, Stanley T. Kellogg, on a motorcycle, was the star of the afternoon. He flashed up the hill on a 7 horsepower Indian motorcycle in the great time of 1:03⅘, considerably faster than any of the automobiles.

It is estimated that between 5,000 and 6,000 persons were at the course, which was roped off and patrolled by Company H, of the Naval Brigade, and had numerous cars parked in the fields on each side. The price of parking space was 25 cents per person, and a good business was done.

The summaries:

Gasolene Cars, 40.1 to 60 Horsepower, Inclusive.

Driver.		H. P.	Time.
Robinson	Stev.-Duryea	51 1-6	1:10⅕

Open to Gasolene Cars, 24.1 to 40 Horsepower, Inclusive.

Hancock	Stev.-Duryea	36	1:22⅗
Dennison	Knox	30.05	1:35⅖
R. Burman	Buick	34.22	1:35⅗
Oliver Light	Chal-Detroit	40	1:35⅘
Bourque	Knox	38.8	1:37⅗
B. Bailey	Bailey Speedster		2:26⅕

Gasolene Cars 15.1 to 24 Horsepower Inclusive.

E. Cameron	Cameron	16	2:15⅕
R. Burman	Buick	22	2:14⅗

Gasolene Cars Selling for $850 or Less.

F. F. Cameron	Cameron	16	2:34⅕
W. E. Smith	Middleby		5:17⅕

Gasolene Cars Selling for $850 to $1,250 Inclusive.

R. Burman	Buick	22	2:12⅘
E. Cameron	Cameron	16	2:17
W. E. Smith	Middleby		3:41⅘

Gasolene Cars Selling for $1,251 to $2,000.

E. P. Blake	Jackson		2:01⅘
F. F. Cameron	Cameron	24	2:13⅕

Gasolene Cars Selling for $2,001 to $3,000.

Bourque	Knox	38.8	1:26⅗
Dennison	Knox	30.6	1:35⅖
Oliver Light	Chal-Detroit	40	1:47⅖
B. Bailey	Bailey Speedster		2:25⅗

Gasolene Cars Selling for $3,001 to $4,000.

Hancock	Stev.-Duryea	36	1:23⅖

Gasolene Cars Selling for $4,00 and Over.

Robinson	Stev.-Duryea	54.1	1:10

Gasolene Cars with Piston Area of 50 Square Inches and Under.

Ray Phelon	Atlas	34	2:34⅗
B. Bailey	Bailey Speedster.		4:00⅗

Gasolene Cars with Piston Area Over 50 Sq. In. and Under 65 Sq. In.

Dennison	Knox	30.06	1:40
E. Cameron	Cameron	24	2:11⅘
R. Burman	Buick	22	2:12⅗
B. Bailey	Bailey Speedster.	63.61	2:40

Gasolene Cars with Piston Area of Over 65 Sq. In. and Under 90 Sq. In.

Hancock	Stev.-Duryea	36	1:18⅗
O. Hedstrom.	Knox	38	1:28

Gasolene Cars with Piston Area of 90 Square Inches and Over.

Robinson	Stev.-Duryea	54.1	1:09⅘

Open to All Gasolene Cars.

Basle	Knox	48.8	1:08
Bourque	Knox	38.8	1:09⅘
Hancock	Stev.-Duryea	36	1:16⅕
Robinson	Stev.-Duryea	54.1	*

Open to All Gasolene Stock Cars.

Hancock	Stev.-Duryea	36	1:22
Dennison	Knox	30.06	1:36⅗

Club Event. Cars Owned by Members of the Automobile Club of Springfield. All Types and Motive Power.

H. Knudson	Stanley Str.	20	1:23⅘
O. Hedstrom.	Knox	38	1:39⅗

Record of Hill. Open to Cars of Any Types and Motive Power.

Bourque	Knox	30.06	1:09⅗
L. Baldwin	Stanley Str.		1:11⅗
Basle	Knox	48.8	1:12

Motorcycles with 30.5 Cubic Inches Cylinder Capacity and Under.

C. Gustafson	Indian	4	1:24⅘
S. T. Kellogg	Indian	4	1:29⅗
H. B. Lake	Indian	4	1:50

Motorcycles with 61 Cubic Inches Cylinder Capacity and Under.

S. T. Kellogg	Indian	7	1:03⅘
C. Gustafson	Indian	7	1:09⅗
H. B. Lake	Indian	7	1:13⅗
E. A. Shotwell.	N. S. U.	7	1:22⅘

Exhibition Mile on Motorcycle.

J. Derosier	Indian	7	1:11⅗

* Car overturned.

Will Start Endurance Run at Night.

Interest in the approaching 24 hours endurance contest from Boston to Bretton Woods, September 23-24, is on edge. The Bay State Automobile Association sent a car over the proposed route last week and from the report of the "Pathfinders," prospective entrants will not be deluded into the idea that this contest, which will penetrate the White Mountains, is to be a joy ride.

When the run was originally proposed, the roads were in much better condition that at present, and for this reason some changes have been adopted to make work easier for the drivers. There are very good roads on the first and last parts of the route as laid out at first, and under the original schedule these sections would have to be covered in daylight hours, while the bad sections would have to be traveled at night. The Bay State committee has decided therefore that such a plan would be unwise and is now arranging a time schedule in order that the good roads will be covered in the dark, allowing the drivers the benefit of the sunshine while tackling the many miles of bad highway between Ossipees and Concord, N. H. This will necessitate the run starting at night and it probably will leave Boston about 10 p. m., Thursday, September 23.

The total distance of the route outlined is 359 miles. In addition to the start and finish controls there will be intermediate checking stations at Rochester, Bretton Woods and Concord, N. H. To discourage speeding a pacemaker will precede the participants, starting 15 minutes ahead of them. Any contestant who attempts to pass this car if the latter is running on schedule, will be disqualified at once.

Athletic Club Promotes Sealed Bonnet.

"Sealed bonnet" contests went out of fashion some months ago when Joyous Widow hats and other styles of exclusive headgear came into vogue, but that form of test is to be revived. The Illinois Athletic Club expects to hold a contest of the sort from Chicago to Milwaukee during Thanksgiving week. The club has applied to the American Automobile Association for a sanction. The run is to be held in connection with a holiday gymkhana fest connection with a holiday gymkhana.

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SPLIT SPEED HONORS AT LATONIA

Oldfield Wins the Sweepstakes, but Christie Makes the Fastest Time—Two Days of Racing.

Three doctors and an undertaker lolled around the center of the Latonia (Ky.) track on Saturday and Sunday, September 12-13, while an automobile race meet was in progress. When questioned as to what they were there for, they replied, "for business." Their business, however, was dull, for no bad accidents occurred, and the undertaker had to go home to his wife without a single order for his latest fall stock styles.

The stars of the two days meet were Walter Christie, Barney Oldfield and Charles Soules, and records for the track were chipped off a few seconds. These three, in addition to other events, took a flyer at record trials on the first day of the meet and Walter Christie cut loose with his front-wheel drive creation and whizzed around the dusty mile oval in 57⅘ seconds, lowering the previous record for this track, held by Barney Oldfield, who set up 59⅗ as a mark last year. Oldfield made three attempts to beat the figure. He failed, however, the best he could do being 0:58. Soules also tried it, but missed widely, taking 1 minute 3 seconds to make a circuit.

In the first part of the three cornered sweepstakes (which was run on two days), Oldfield got his car working better than Christie's and won two heats in 1:06 and 1:11⅗, respectively. Christie and Oldfield each beat Soules without difficulty, and when these two came together, both made slower time; Christie's failure to make his car behave properly, giving Oldfield the victory in 1:11⅗.

A three miles event with only two entrants, J. K. Gilchrist and Charles Soules, was won by the latter in 3:28⅗. Soules also won the five miles novelty race, in which contestants had to take on and unload passengers. M. Mulhauser was second, and C. Conklin third. The time was 8:09⅕.

On Sunday, when the three-cornered sweepstakes race was resumed, Oldfield again was lucky, taking the first and third heats in 1:06⅗ and 1:04⅕. Christie won the second heat in 1:03⅕, but in the other two, his car seemed to fail him for speed. He was a disappointed driver when the race was over.

Soules, Oldfield and Christie drove exhibition miles, in which the former did a slow 1:13, and Oldfield a lively 1:00⅗. Christie then tried again and plowed the loose dirt in 1:00 flat.

Walter I. Donnelly won a two miles stock car race in 3:25, with J. K. Gilchrist second and George Windisch third. A mile race for electric runabouts went to Mrs. Gilchrist in 3:11⅕, with George Emerson second. J. K. Gilchrist also won a special match race at three miles with Charles Windisch in 2:38.

The summaries:

Saturday, September 12.

Three miles open—Won by Charles Soules; second, J. K. Gilchrist. Time, 3:28⅘. (No other entries.)

Novelty race—Won by Charles Soules; second, M. Mulhauser; third, C. Conklin. Time, 8:09⅕.

One mile trials against time—Walter Christie, 0:57⅘; Barney Oldfield, 0:58; Charles Soules, 1:03.

One mile sweepstakes, trial heats—Barney Oldfield won first two heats. Time, 1:06, 1:11⅗.

Sunday, September 13.

Three miles stock cars costing less than $3,000—Won by Walter F. Donnelly; second, J. K. Gilchrist; third, George Windisch. Time, 3:25.

Exhibition mile—Walter Christie, 1:00; Barney Oldfield, 1:00⅗; Charles Soules, 1:13.

One mile for electric runabouts—Won by Mrs. Gilchrist; second, George Emerson; third, J. K. Gilchrist. Time, 3:11⅕.

Two miles match race—Won by J. K. Gilchrist; second, Charles Windisch. Time, 2:38.

One mile sweepstakes, continued from previous day—Barney Oldfield won first and third heats, winning the event. Second, Walter Christie; third, Charles Soules. Oldfield's time, 1:06⅗, 1:04⅕. Christie's time for second heat, 1:03⅕.

Fairmount Park Race Gets a Date.

When an automobile race for Fairmount Park, Philadelphia, was proposed some weeks ago by the Quaker City Motor Club, many doubted if such a thing as a permit would be granted. By resolution of the Fairmount Park Commissioners, however, permission was given to the club last Friday to hold a 200 miles race in the Park on Saturday, October 10, the last day of Founders' Week. This date, it will be noticed, happens to coincide with that of the Motor Parkway Sweepstakes on Long Island. The first regular entry for the Philadelphia event was that of Louis J. Bergdoll, who has entered a 60 horsepower American Locomotive which he himself expects to drive. In addition, he may enter a Thomas with George Salzman as driver.

Road Tarring Injures Paris Trees.

After an experiment of four months duration the authorities of the city of Paris have discovered that the tarring of the avenues in the Bois de Boulogne has resulted in the destruction of numerous fine trees and the grass and flower beds bordering the roads. Consequently the tarring is to be abandoned and the old method of watering to allay the dust resorted to once more. It is supposed that some unsuspected element in the process rather than the process itself may be responsible for the difficulty.

VAIN EFFORTS AT TRACK RECORDS

Louisville Race Meet Develops Spectacular Attempts—Salzman the Star—Ten Events Contested.

George Salzman at the wheel of one of the 1906 Vanderbilt cup Thomas cars was the "feature" of the race meet at Churchill Downs, the famous horse track at Louisville, Ky., on Saturday, 13th inst. He made several spectacular attempts to lower the record of 59 seconds for Kentucky tracks, and although he made some meritorious circuits and kicked up voluminous clouds of dust, the best he could do was 1:03⅕.

George Suth was the amateur star of the occasion. He won the 5 miles event for cars between 21 and 40 horsepower, in an Oldsmobile in 6:39, and also came very near Salzman's figure when he made a mile trial in the same car in 1:15⅗. Later he won another five miles event, beating Owen Moteler in a Chalmers-Detroit, after a hot fight in 6:32. M. Middleton won the special one mile "selling race" in a Buick, with Hughes Moore (Autocar) second, and M. R. Oliver (Cadillac crossing the line third.

The summaries:

Two miles, single cylinder stock cars—Won by N. G. Marks (Reo); second, M. R. Oliver (Cadillac); third, H. T. Gratz (Reo). Time, 4:29.

Three miles, stock cars listed between $851 and $1,250—Won by Clarence Gardiner (Buick); second, H. T. Gratz (Buick); third, Treece (Buick). Time, 4:29⅘.

Three miles, stock cars, $1,251 to $2,000—Won by Ira S. Barnett (Cadillac); second, H. T. Gratz (Buick). Time, 4:20⅕.

Three miles, for cars between 15 and 24 horsepower—Won by Clarence Gardiner (Buick); second, Treece (Buick). Time, 4:22⅗.

One mile match race—Won by George Salzman in 120 horsepower Thomas Vanderbilt cup car; second, George A. Dunham, specially built Louisville racer. Time, 1:25⅗.

Five miles for cars between 21 and 40 horsepower—Won by Jack Suth (Oldsmobile; second, Owen Moteler (Stevens-Duryea); third, H. T. Gratz (Buick). Time, 6:39.

Special one mile race between Thomas cup car and motorcycle—Won by George Salzman (Thomas); second, motorcycle.

Record trials for Kentucky tracks—George Salzman (120 horsepower Thomas), 1:03⅕; Jack Smith (Oldsmobile), 1:15⅗.

Five miles for stock cars between 40 and 60 horsepower—Won by Jack Suth (Oldsmobile); second, Owen Moteler (Chalmers-Detroit). Time, 6:32.

One mile selling race—Won by M. Middleton (Buick); second, Hughes Moore (Autocar); third, M. R. Oliver (Cadillac).

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REVISED HORSEPOWER FORMULA

British Manufacturers Shake up Mathematics and More Power Results—How It Affects American Motors.

Following a period of serious and weighty consideration the Society of Motor Manufacturers and Traders of Great Britain has presented to the waiting world yet another proposed universal rating formula for internal combustion engines. Formulas of the sort have multiplied rapidly in Great Britain during the last few years. The most significant, and so far, the only one to be at all generally accepted was that of the Royal Automobile Club, which was subsequently adopted by the Licensed Association of Automobile Manufacturers in this country. The obvious defects in this expression when applied to motors of various classes, such as may be brought together in competition, however, have given rise to so much discontent in England that the S. M. M. T. has felt called upon to offer a modification based on a more extensive recognition of the forces at work within the motor.

The new formula as presented in a voluminous and cabalistic report by the sub-committee appointed for the purpose takes the following form:

Horsepower $= k \times d\ (d - 1)\ (r + 2)\ n$ where k is a constant, d the bore of the cylinder in inches, r the ratio of stroke to bore, i. e., stroke in inches divided by bore in inches, and n the number of cylinders.

The constant, k, is "variable," strange to remark. That is to say, different values may be assigned to it according to the precise type of motor under consideration.

For touring cars the constant is 0.197 and touring formula then becomes $0.197 \times d\ (d - 1)\ (r + 2)\ n$. For racing cars the constant is 0.333, the difference in these values being due to the assumption that piston speed is greatly increased in motors of the latter type.

It is suggested that in competitions of various kinds, it should not be a difficult matter for the authorities to ascertain what is the highest piston speed likely to be met with and then to assign to the constant k a value which will meet the case.

Incidentally and in the same connection, it is noteworthy that when the formula is applied to the cars entered in this year's Grand Prix race, using, of course, the larger of the two constants, the sequence of ratings developed places the cars in practically the same relation as that in which they finished the race. Possibly this may cast some light on the methods employed in arriving at the valuation of the constant, though this may be an uncharitable conclusion in itself, since the result is the product of a most exhaustive study of the general subject, and the bulk of the report is such as to suggest a far deeper investigation of the problem than would be involved in a mere jugglery of the outcomes of one or more contests.

With regard to the new formula in distinction to its only established predecessor—the "R. A. C." formula, as it is known abroad, it will be remembered that that expression takes the form:

$$\text{Horsepower} = .4 \times d \times d \times n$$

Where d is the cylinder diameter in inches, and n is the number of cylinders.

The assumption made in this case is that with cars of standard design, the elements of piston speed and mean effective pressure will invariably be made as high as possible by the designer, and that in the best practice they will approximate one another in different motors with sufficient accuracy to permit of their being covered by the constant .4. This value of .4, or $1 \div 2.5$, as it is sometimes written, is supposed to cover the average results developed in actual practice, based on averages taken from many close tests. As a matter of fact, however, it is not as close an approximation as might be desired even in touring car practice, while for motors of special design in any way, as those which are made for purely racing purposes, it is wholly inadequate.

The new formula attempts to correct the resulting inaccuracy by supplementing this expression with an expression intended to take into account the differences in output caused by variations in length of stroke, and for those caused by differences in the proportions of the cylinders.

To obtain a good general idea of what the proposed formula means, remarks the Automotor Journal, by way of comment, it is first of all necessary to realize that the power of any gasolene engine depends primarily upon the quantity of explosive mixture which it can dispose of efficiently during a given period of time.

"Other minor things being equal," continues that authority, "that means dependence upon piston displacement per minute, or in other words dependence upon piston area multiplied by possible mean piston speed. Were it not that a small cylinder suffers in comparison with a large cylinder because the heat losses to its proportionately larger combustion chamber walls are greater in relation to the volume of the combustible mixture therein, and were it not that a small piston is lighter than a large piston, it would only be necessary to stick to the R. A. C. 'bore multiplied by bore' system to obtain the first (piston area) part of the desired new formula, and then to tack on a 'piston speed' part to it. But since cylinders of larger bore do, within ordinary limits, give higher powers in relationship to their piston areas—the saving of heat losses more than cancelling the effect of the increased inertia forces that are due to the extra weight of the moving parts—some modification of the 'bore multiplied by bore' (i. e., d^2) part is necessary and this requirement has been met by the S. M. M. T. by using 'bore multiplied by bore minus one' (i. e., $d\ [d - 1]$) instead.

. . . .

"As regards the 'piston speed' part of the new formula—a part which has been entirely ignored by the R. A. C.—there are two things which have to be borne in mind. One is that, over a certain range, higher piston speeds can be obtained in practice with engines that have longer strokes, while the other is that the exact range over which this rule holds good differs according to the actual size (the bore) of the cylinder. A compensation for stroke has consequently been introduced by the S. M. M. T., but not in the most direct manner, the method adopted being such that its effect also depends upon the size of the cylinder. Of course it will be understood that the increased power (piston speed) derived from a lengthened stroke is nothing like in direct proportion to the dimensional increment, so that if a direct method of compensating for stroke had been adopted at all, it would be in some such way as by taking the square root or the cube root of that dimension. Similarly, the S. M. M. T. method gives a much diluted figure, but the

Comparative Results of British and American Formulas.

Make.	No. Cyls.	Bore.	Stroke.	Maker's rating.	A.L.A.M. rating.	S.M.M.T. rating.
Franklin	4	4¼	4	28	28.9	32.1
Pierce	6	5	5½	60	60	73.3
Packard	4	5	5½	30	40	48.9
Corbin	4	4½	4¼	32.4	32.4	36.5
Cadillac	4	4	4½	25	25.6	29.6
Locomobile	4	5	6	40	40	50.5
Oldsmobile	4	4¾	4¾	36	36.1	42.2
Thomas-Detroit	4	5	4¾	40	40	46.6
Thomas	6	5½	5½	72	72.6	87.7
Mitchell	4	4	4	20	25.6	28.3
Maxwell	2	4½	4	12	16.2	17.9
Premier	4	4¼	4¼	24	28.9	32.6
Stoddard-Dayton	4	4¾	5	30	36.1	42.8
Pennsylvania	4	4¾	5¼	50	36.1	43.7
Marmon	4	5	5	40	40	47.3
*Locomobile	4	7¼	6	90	84	173.2
†Mercedes	4	6	6⅜	—	57.6	123.9

* 1906 Vanderbilt Cup car. † 1908 Grand Prix car.

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main point to remember about it is that its actual value is a function of the bore as well as of stroke pure and simple. They, in fact, take the ratio between stroke and bore (i. e., divide the stroke by the bore and call it r, and then add the figure 2 to it (i. e., r + 2) for use in the complete horsepower rating. The complete new formula they have advanced therefore becomes

$$k \times d\,(d - 1) \times (r + 2) \times n$$

instead of the R. A. C.

$$k \times d \times d \times n.$$"

To consider the case of two engines each having a bore and stroke of 4 inches, but one being designed for a very high piston speed, such as would ordinarily be employed in racing engines, the ratings developed by the formula would be respectively 7.092 and 11.988. By the older formula. both would be rated at 5.4 per cylinder impartially.

Obviously an objectionable feature of the new expression would thus be the liability to misunderstanding which might arise as to the proper discrimination in the use of the constants. Indeed, as another foreign commentator naively observes, "the fairest method of applying the formula would seem to be that of adopting a fixed constant for every known make and type of engine. This would at least furnish a figure which the user could use with some degree of certainty." Which is apparently about the same thing as affixing an arbitrary value to the power of the motor, since the result of the formula may be influenced to any desired degree whatever by shaping the constant to produce the required result.

For the sake of comparison the rated output of a number of well-known American made engines are given in the accompanying table as furnished by both the old and new formulas, the cylinder dimensions being supplied in each case for purpose of reference. In each case except the last two, the touring constant which is 0.197 has been used. In the latter, the racing constant of 0.333 enters into the calculation. It will be observed that the new ratings are uniformly higher than the old.

NEW MOTOR FOR A NEW MARMON

To be Applied to a Light Weight Car—Refinements Which are Incorporated in the Engine.

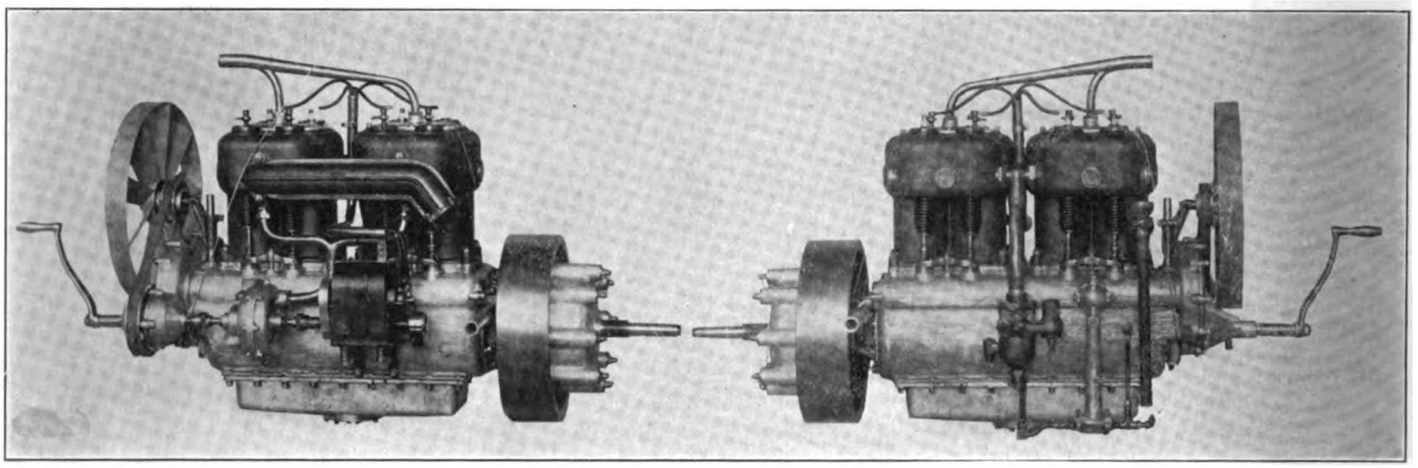
One of the best possible recommendations for a device or system which is in any way radical or differs materially from other systems in use for the same general purpose is its continuance in entirely new models produced by its originator. A case in point is the reappearance of the oiling system which has been in use for some time on the Marmon motors in the latest type of motor brought out by the Nordyke and Marmon Co., Indianapolis, Ind.

This motor, which is rated at 35 horsepower, is to be mounted in a new medium sized, light weight car which the company is bringing out for the coming season, and which is to be known as Marmon "32."

Those familiar with the construction of the present type of water cooled motor, as with the air cooled models which preceded it, will recognize in the accompanying illustration of the carburetter side of the motor, the outlines of the pump casing and its gear driven transmission enclosing the driving element of the effective oil flooding system by which the entire motor is lubricated automatically, all its bearing surfaces being continually drenched with oil regardless of the angle at which the motor happens to be standing. It is partially on account of the success of this system, as a matter of fact, that the straight line drive of the Marmon cars has been secured, in which the motor is placed at an angle to the chassis line.

The details of the oiling system include a hollow crank shaft through which the oil is conducted to the crank pin bearings, whence a portion of the supply is led up the connecting rods through ducts especially provided for the purpose, to the wrist pins. The same source also supplies the main bearings of the crank shaft. The overflow from the various bearing surfaces drains back into the oil pan in the crank case, and after being filtered, is returned to the sump from which the lubricating pump draws its supply, to be used over again.

Other characteristics which will be observed in the motor in question, are the symetrical arrangement of the jacketed, twin cylinder castings; the opposed location of the valves, the intake in particular being characteristic of these makers, in that the ports are siamesed and the connection with the manifold is made at the side of the intake chamber instead of in the center as is more commonly done, thus simplifying the construction of the manifold. Upon the exhaust side, the arrangement of the fan, pump and magneto drives is noteworthy for its stability, these parts being mounted on very heavy brackets. The ignition system is that of the Remy magneto.



EXHAUST AND INLET SIDE OF NEW MARMON MOTOR

The arrangement of the fan upon a pedestal mounted over the forward gear housing with ample facility for adjustment is noteworthy. The method of mounting the motor in the chassis also is revealed in the tubular member seen projecting from the rear end of the machine, just forward of the fly wheel on the carburetter side. The elasticity of the support thus obtained guards against any possible distorsion of the motor as a result of weaving in the frame, besides absorbing the driving torque close to the clutch, where the stresses resulting from it are most violent.

Spark Coils for the Tropics.

Spark coils intended for use in the tropics should be designed with a view to the special conditions under which they must be expected to work. The intense heat of the sun in the torrid zone is not infrequently sufficient to disturb the action of the vibrators, altering their adjustment not a little, also warping the wooden casings of the coil boxes, and even melting the insulation with which they are packed.

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GREENWICH HOLDS A CARNIVAL

It Insludes a Contest on Puts Hill and a Decorated Parade — Afterward Everyone Waltzed.

Aristocratic Greenwich, Conn., was the scene of quite a motor carnival on Saturday last, the 12th inst., in which many New Yorkers and summer residents of nearby towns participated. A decorated parade of costumed riders and decorated cars, and a hill climbing contest were the features of the day, handsome cups being offered in each event.

The climb took place in the morning on Puts hill, on the old Post road. C. P. Geddes, whose Packard won in its class, covered the half mile incline in 44⅕ seconds. George A. Helman was a close second with a Simplex, his time being 0:44¼.

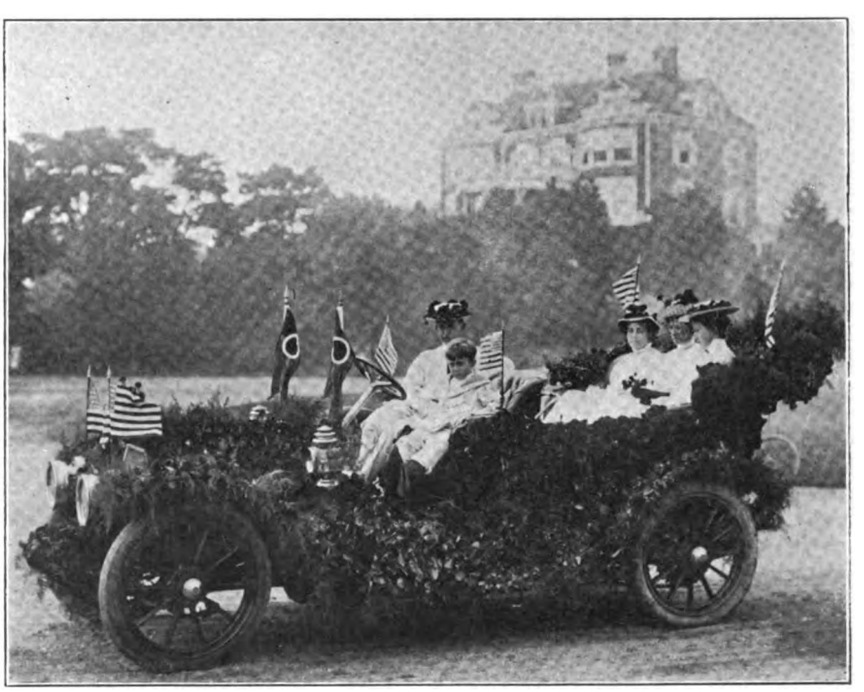
In the lighter classes, J. A. Bullard entered two Buick cars and won two first prizes, and Tito Ferri, who has had some experience in Vanderbilt cup races, tied with Walter Scofield, an amateur, for a first place. In running off the tie, Ferri's time was 0:54 and Scofield's 0:56⅘.

In the afternoon a parade of bedecked machines, many of which were dainty and artistic floats, covered a good deal of Connecticut ground. Headed by a "rubberneck" coach with a brass band, the pageant started through the streets of Greenwich and threaded its way through Field Point, Belle Haven, Edgewood Park, Rockridge, Riverside and Sound Beach, passing the club houses of the Belle Haven Casino Association, Indian Harbor Yacht Club, Fairfield County Golf Club, Riverside Yacht Club, and Sound Beach Golf and Country Club. At the Casino the judging occurred and twelve cups for the hill climbing and decorations were awarded.

The first prize in the parade was awarded to Alfred Gilbert Smith, of Edgewood, Greenwich, whose large touring car trellised with a bower of white floral effects, was loaded with a dozen or more children. The youngsters seemed to make quite a hit with the spectators and the entry was promptly awarded the first cup.



ALFRED GILBERT SMITH'S FIRST PRIZE WINNER



W. H. McCORD'S THIRD PRIZE WINNER

W. H. McCord, of Belle Haven, whose car was covered with ferns and foliage—all in green—was another artistically gotten up prize winner. Even Mr. McCord's Cheerful Widow hat was trimmed with green. A dance in the Casino marked the wind-up of the carnival.

Dangers of the Pit.

In the opinion of an expert, the average owner thinks that every measure of safety has been installed if electric lights have been put in to take the place of an open flame for lighting the interior of the garage and for examining the car.

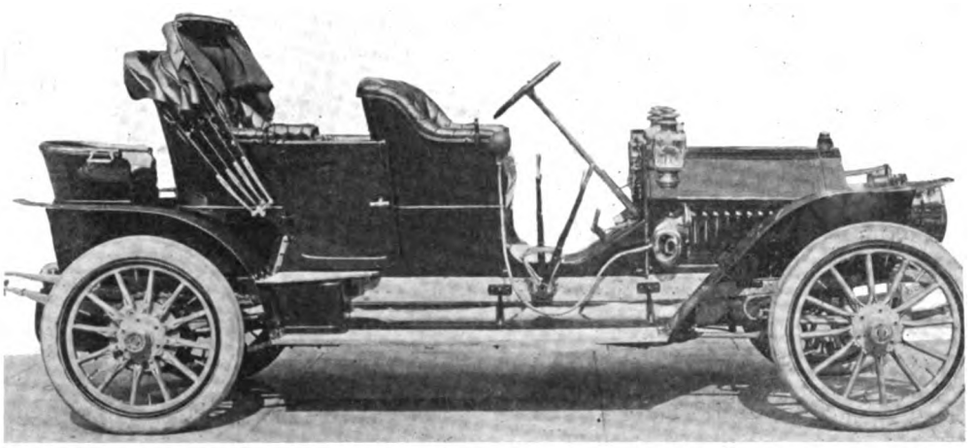
"Not long ago," he said, "I know I saved a man from a beautiful explosion which would have probably blown us both into kingdom-come or further, and would have ruined both the garage and the motor car for the use of his widow. We went into his garage about 10 o'clock in the morning and on opening the door there was as heavy a smell of fresh gasolene as my nose ever encountered. The car was standing over the pit in the middle of the floor and fuel was dripping steadily into the pit, the bottom being wet with it. Nevertheless, the owner was about to insert the switch plug and start up his engine, to show me some feature of its running. If I had not stopped him short, things would have been a wreck because even if the electric spark at the vibrator or the commutator had not ignited the vapor surrounding the machine, one misfire in the engine would have sent a subsequent flame out of the muffler right into the pit, where the vapor was represented in all degrees of explosive mixture with the air. We pushed the car outdoors and let the wind sweep through the garage, but it was only because I have some little reputation of knowing my business that I was not laughed at for representing the incident as having been fraught with danger."

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LOCOMOTIVE'S COUPLED BODY

Big Company Adds Another Model to Its Line—Its Features and the Other Cars Listed.

The "close coupled" body has of late come into considerable favor for touring purposes, and the body equipment of the 1909 American Locomotive 40 horsepower car is an example of the latest development along this line. As will be seen by the illustration, an extra seat is placed at the back, while the regular capacity forward is for four people including the one at the wheel, although a little crowding in the tonneau would easily make it possible to take care of five.



"CLOSE COUPLED" AMERICAN LOCOMOTIVE CAR

The car has a wheelbase of 126 inches, which gives plenty of room for the type of body shown. Large wheels are provided, the forward pair being equipped with 4½ by 36 inch tires and the rear fitted with 5 by 36 inch. The power plant is a four cylinder motor, 4¼ bore by 5½ inch stroke. There are four speeds forward and a reverse. Ignition is by low tension Simms-Bosch magneto and a very complete system of force feed lubrication is employed. The car is supplied in colors to meet the wishes of the purchaser, and sells for $5,000 complete with equipment. In addition to this 40 horsepower model with the "close coupled" body, the American Locomotive Co. is producing at the Providence (R. I.) factory three other models for 1909, including a six cylinder car at $6,000, a town car at $4,500 and a cab at $3,350, all of which present advance features of design.

American Tools for French Factories.

During the course of an investigation as to the use of American machine tools in Europe, Special Agent Capt. Godfrey L. Carden found in a recent visit to the Panhard & Levassor works at Paris and at Rheims that of the 1,025 machine tools in service at the Paris shops, 700 were of American make, while of the 718 at Rheims, 600 came from the United States. His reports show that practically all of the more prominent foreign automobile manufacturers employ American machine tools in growing quantities.

Equal Pressure of Brake Shoes.

It is of the utmost importance that brakes of the shoe type, as contrasted with those in which the braking effort is developed by a band encircling the drum, should be so adjusted that both members come into equal contact with the drum at precisely the same instant. In many types of brake this must occur unless the parts are badly out of condition. In others direct adjustment which is provided for the purpose may be responsible for a difficulty in this respect. Unless the pressure on both sides of the drum is equal that member tends to be thrown out of line, the shoes wear unequally, take hold with a clattering grip, and are wholly uncertain in respect to power developed.

Magnets in Motor Overhauling.

In overhauling the motor or transmission gear it not infrequently happens that small parts such as nuts or washers fall out of sight into the oil reservoir of the housing, their removal occasioning not a little trouble to the workman. In many cases this may be avoided by removing them with the aid of a magnet. A temporary magnet may be contrived by winding a small soft iron rod with insulated wire and connecting the coil thus formed with the terminals of an ordinary electric light circuit.

List Many Motor Car Specialties.

The Turner Brass Works, Sycamore, Ill., has embarked heavily into the manufacture of motor boat accessories, of which they are producing a very complete line. They will, however, continue to make their various automobile specialties which are coupled with the boat accessories in the Turner catalog which just has been issued.

DAIMLER'S TWO "SENSATIONS"

Expectantly Awaited, They Lack Novelty—One a Front-Drive Cab, the Other a Cylindrical Valve.

With praiseworthy patience some of the old ideas which have seen the light almost every year since the automobile industry was big enough to have a name for itself, continue to come to the surface from time to time under the guise of absolute novelty. A striking example of this is found in a promised innovation which the English Daimler Co., is reputed to have under way as a novelty for the coming year.

This turns out to be nothing more nor less than a motor having circular cylinder ports for the admission and exhaust of the gases, while their passage is controlled by the movement of a cylindrical sleeve valve which works in the engine cylinder between the piston and the walls. The exteriors of the cylinders of the engine in question are so constructed that the only visible organs are the spark plugs. It will be remembered that exactly this plan was put into service in this country in a car built in the middle West, several years ago, and that it became quite well known on account of its peculiar construction. Another "novelty" which smacks of former usage and which also is said to be a contemplated innovation on the part of the same firm, is a motor cab chassis, equipped with a transversely mounted engine and driving directly to the front wheels, which are used for both guiding and propulsive purposes.

Graduated Ground Glass Stops Glare.

Among the numerous devices which have been proposed for the alleviation of the glare of powerful headlights, one which is in use in England to a certain extent consists of a special form of lense which, in place of being perfectly clear over its entire surface, is rendered opaque on the upper half of the circle, thus subduing the rays which otherwise would be thrown upward. The entire upper half of the lense is ground to bring this about, but in unequal degrees, the upper edge being most affected, and the shading being graduated toward the center where the surface is only lightly touched. As a result of this the full effect of the light is obtained on the road directly in front of the lamp and ahead below the plane of the center line. Above this point only a subdued glow is obtained which is not blinding to the eye of an observer stationed in front of the lamp, but which furnishes a certain amount of upward illumination.

Auburn Adds to Its Plant.

The Auburn Automobile Co., of Auburn, Ind., are building a large addition to their factory; it will permit a doubling of their output for 1909.

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TOLEDO TRIES AN ENDURANCE RUN

Eight of the Fifteen Starters Obtain Perfect Scores—Togler Wins the Cup for Amateur Drivers.

Taking a trying triangular trip, participants in the first annual endurance and reliability run of the Toledo Automobile Club tasted the joys of endurance touring on September 8, 9 and 10, the route being to Columbus, to Cleveland and back to Toledo, with a day for each leg. There were 15 starters, and eight perfect scores remained at the finish, the distance covered in the three days being 521 miles. As the crow flies the distances between the three Ohio cities is very much less than by the route taken by the tourists, but the circiutous and roundabout itinerary chosen was purposely selected to crowd a whole lot of travel into each day and still land at a night stop where the grill rooms and hotel accommodations were good.

From Toledo to Columbus, the State capital, was 147 miles, and two perfect scores were destroyed. Seven miles south of Marion, O., the Stoddard-Dayton runabout driven by Spieker, came to grief as a result of rushing downhill at a speed so great that in order to avoid striking a slow-going buggy the car went into the ditch and hit an iron fence. A passenger, Henry H. Hower, automobile editor of the Cleveland Plain Dealer, was not able to stop at the moment the car did, and as a consequence he gave a brief but exciting imitation of the Wright brothers in full flight. But after a successful air trip of 20 feet he decided to alight, a decision which he reached with such suddenness as to sprain one foot and get a severe bump. Hower was taken aboard a Maxwell, which served as a red cross car, and hurried the remaining 40 miles to Columbus, where he received more complete medical attention than was possible on the road. The Stoddard-Dayton was far behind its schedule before it could be righted and repaired sufficiently to resume. Two of the three Maxwells came through with perfect scores, but the four cylinder model driven by C. W. Kelsey had trouble with the fuel feed and was penalized 132 points for tardiness. Tire trouble and dust were the evils of the day.

Four perfect scores went by the board in the 195 miles run from Columbus to Cleveland, the unfortunate cars being the Mitchell, two Maxwells and the Stoddard-Dayton touring car driven by Atwood. The Maxwell four cylinder car received further penalization for being late. Plenty of hills and rough roads were encountered. The third day, from Cleveland to Toledo, 180 miles through Norfolk, Sandusky, Tiffin, Fostoria and Pemberville, punctured the tires and the perfect score of the Chalmers-Detroit. The cars themselves together with long strings of buggies and wagons going to the Elyria fair made a smothering dust that shut out the scenery and by contrast brought up memories of beautiful oil dressed and dustless roads that had been encountered the first day. At Fostoria the biggest crowd of the trip turned out to greet the tourists, the streets being lined with cheering masses of people. On approaching Toledo, the 13 cars remaining in the tour were lined up in procession order and paraded into town, where after a final inspection they were dismissed.

T. R. Togler, Oldsmobile, won the cup for amateurs with a perfect score.

The score at the finish was as follows:

Driver and Car.	Score.
F. H. Adams, Mora	1,000
Scheifler, Jackson	1,000
C. D. Paxson, Jackson	1,000
Adams, Reo	1,000
Mert Phillips, White	1,000
D. B. Huss, Brush	1,000
Andrew Auble, Oldsmobile	1,000
Macheskey, Chalmers-Detroit	973
McIntyre, Mitchell	973
Bleasdale, Maxwell	705
Kelsey, Maxwell	539
Atwood, Stoddard-Dayton	undetermined

Road Racing, Mexican Style.

Some half dozen competitors in the "cup race" from Monterey, Mexico to the Concepcione Hacienda on Tuesday, September 1, had a diverting time of it. Two cars survived the run of 150 kilometers, both reaching the goal late at night. The cup was won by A. E. Derby, with Patrico V. Milmo a tardy second; the other contestants falling by the wayside at various stages of the contest. One of the latter was towed about 20 miles by oxen, while another broke down five miles from the finish and the driver had to walk. Others managed to catch railroad trains.

Glencoe Loses Faith in Juries.

Jury trial for alleged automobile speeders is the latest innovation, not the least surprising feature being that it had its first introduction at Glencoe, Ill., a town which has made for itself a reputation of being merciless to the guilty and mighty rough on the innocent. The results of the experiments with the jury system, however, have not been entirely successful, as in the cases which came up last week the jury in each instance was unable to agree, and trial by judge alone became necessary.

Michigan to Hold a Touring Contest.

The Michigan Automobile Association has organized a touring contest which will occur September 24-27. The route will be from Grand Rapids to Detroit and return. Glidden rules will apply.

Two Days of Racing for Milwaukee.

Milwaukee is to have a two days race meet on September 25 and 26. It will be promoted by the Wisconsin Automobile Association in connection with the State fair.

NEW YORK'S EFFICIENCY TEST ON

Thirty-seven Starters in the Run to Montauk Point and Return—Split up into Many Classes.

Although organized on comparatively short notice, no less than 36 contestants started yesterday on the two days mechanical efficiency test from New York to Montauk Point, L. I., and return.

The event is being conducted under the auspices of the New York Automobile Trade Association, whose members supported it loyally.

The cars started at 7 a. m. at Columbus Circle, New York City, and were escorted across the Bridge to Brooklyn, and a detour made to Bay Ridge, L. I., where the cars were officially checked out. The first day's run will be to Montauk Point, 145 miles, the route bein retraced the following day. There were two general divisions of the contest, trade and amateur; and these are divided as regards price into eight classes, as follows:

Class A, cars selling for $850 or less; B, $851 to $1,250; C, $1,251 to $2,000; D, $2,001 to $3,000; E, $3,001 to $4,000; F. $4,000 nd over; G, taxicabs carrying two passengers and driver, and H, the touring division. The entries were:

Trade Division.

Driver.	Class.	Make.
E. H. Brandt	A	Cadillac
F. O. Hinhauser	A	Maxwell
C. W. Kelsey	C	Maxwell
W. W. Burke	E	Mora
R. M. Owen	B	Reo
Mrs. J. N. Cuneo	F	Rainier
L. A. Disbrow	F	Rainier
C. A. Kirchhof	D	Mitchell
S. B. Bowman	D	Apperson
J. W. Gogarn	A	Reo
Charles Lowd	E	White
Wm. Knipper	C	Chalmers-Detroit
F. G. Falberth	D	Oldsmobile
Carl Reichenbach.	E	Stevens-Duryea
V. P. Pisani	F	Zust
J. W. Mears	F	Acme
Frank Dunnell	A	Ford
C. A. Emise	F	Lozier
Frank Eveland	E	Stevens-Duryea
O. R. De Lamater.	C	Mitchell
C. H. Tangemann.	E	Lancia
L. Young	E	Stevens-Duryea
H. C. Townsend	F	Locomotive
P. J. Johnson	E	Locomotive
W. W. Price	A	Brush
A. H. Whiting	D	Stoddard-Dayton
W. D. Brown	C	Mitchell
E. H. Partridge	F	Stearns
Paul Cimiotti	D	Pullman

Touring Division.

W.E. Shuttleworth	D	Haynes
W. J. Wyatt	D	Oldsmobile
Eugene Bofinger	C	White
Daniel Sheehan.	Truck	Knox
C. M. Louther	F	Stevens-Duryea
W. R. Ross, Jr.	D	Acme
R. Newton	D	Stodard-Dayton
Mrs. J. R. Ramsey	C	Maxwell
F. A. Burrelle	C	Autocar
H. M. Casbrunt	F	Lozier
Harry Fosdick	Special	Lancia

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AS A CURE FOR TUBERCULOSIS

Physician Who Examined Edge After His 24 Hours Ride Renders Belated Report—His Remarkable Views.

When, months ago, S. F. Edge created his remarkable 24 hours record on the Brooklands (England) motordrome, it transpires that he was closely watched by Dr. L. P. Gibson, a London physician, who examined him minutely both before and after the race. The results of the doctor's examinations, which but recently have been printed in a medical journal, border on the startling. For, according to Dr. Gibson, motoring at high speed is a cure for tuberculosis and he says that Edge's case proved it. Edge, it must be understood, is not a consumptive, but delicate tests showed that his lungs were in better condition to resist tubercular infection after the race, than before he started. In the report which the medical man has found courage to make public and risk having his colleagues contradict, he says:

"Edge's temperature before starting was 98.4 degrees, pulse, 74. At the end of the race his temperature was 100 degrees and his pulse 70. I take it that the slowing was due to exhaustion, that the blood pressure was slow, due to vagus control, and that the residual blood in the left ventricle was increased in amount. The condition of weak pulse may be accentuated by the fact of the blood being 'soaked up," as it were, by the lungs, owing to the long continued rapid movement through the air.

"Before the ride a specimen of blood was taken and examined for the index of resistive power to tubercular infection, which was found to be 0.85. Another specimen taken directly after the race gave 1:17. That the power of resistance to the tubercle bacillus should be raised after the long journey is very noteworthy, and helps to strengthen the opinion held by many of us that motoring is an effective treatment in some cases of tuberculosis, and that the gloomy prophecies of some anent the bad effects of great speed on the system were incorrect."

"Auctioned" Car While It Blazed.

Sang-froid distinguished the deportment of James M. Cornwall, of Red Bank, N. J., when his machine burned up on the roadside and he held an auction over the wreck as the flames ate up the woodwork and played among the metal parts.

As the car stopped in Morgan's Station, N. J., on account of an open drawbridge, it was noticed that a small fire was disporting itself in the underworks. The attention of the occupants of the car was drawn to it by people on the sidewalk and on the veranda of the club house of the Tuesday Club. By the time Cornwall and his family got out to look, the car was broiling nicely and in a minute more it was a mass of flames. Spectators offered to try and save the car, but Cornwall seemed very cool and indifferent, it is said, and asked the crowd for bids on the machine as it stood. The rapidity with which it was being reduced to junk by the fire made the bidding very timid, and it was started with 50 cents. By humorous and energetic auctioneer methods, however, the owner succeeded in running it up to $10, which sum he promptly accepted and leaving the car to its fate, he got on a trolley car with his wife and son and rode away.

The blaze continued and the bystanders began to speculate as to when the gasolene tank would blow up. A sharp explosion sent them scurrying in a panic, but it was only one of the tires. Three similar explosions followed as the heat weakened the rubber and expanded the air inside. As the gasolene flowed more freely from the tank the flames swept over to the club house and set the veranda on fire, so that vigorous work by a bucket brigade was necessary. Late in the evening, when what was left of the car had cooled down so that it could be handled, Wood Applegate, the successful bidder, drew up with a two wheeled cart and loaded up with the scrap that represented his $10 purchase.

To Stop the Small Boys' Pranks.

Adventuresome boys who hop on the running boards of moving automobiles are to be the subject of special attention from the Omaha (Neb.) police, the chief having issued instructions to the patrolmen to stop the practice by making arrests whenever the boys are caught doing it. Likewise the youthful marauders who like to "pretend" chauffeur by jumping into unattended cars that stand by the curb and yanking the levers and turning the steering wheel first one way and then the other, are to be taken into custody.

Licking County Automobilists Organize.

The Licking Automobile Club has been organized in the Ohio county by that name with the following officers: President, J. I. Matthias; secretary, M. J. Reese; treasurer, Carl Swisher; executive board, John Swisher, A. B. Schauwecker, J. R. Fitzgibbon, Fred C. Evans, J. J. Carroll, James C. Mills, A. H. Heisy, E. T. Rugg, W. W. Wehrle, W. S. Weiant, J. S. Jones, H. B. Rusler, Job Wilson, Lewis Coffman and C. A. Pence.

For a Motordrome in France.

After the lapse of considerable time, the much-discussed scheme for the establishment of a permanent motordrome in the Puy-del-Dome district of France has taken definite shape in the organization of a syndicate to develop the project. La Société d'Etudes du Circuit Permanent, as it is called, has made its modest appearance with a capitalization of $10,000.

WHERE RED CARS ARE DANGEROUS

Tall Tale Told by a Tourist Returned from the Dakotas—Offers Battered Car as Evidence of Truth.

Peculiar local conditions sometimes affect the popularity or unpopularity of certain colors and various localities have become marked by their likes and dislikes in this respect. While Davenport, Ia., is apparently enamored of grays—one manufacturer alone having supplied eighteen especially finished gray cars for Davenport owners—there are other places where some one color is under the ban. North Dakota and South Dakota cross red off their list entirely because of the danger it presents to anyone so unfortunate as to select it. At least that part of North and South Dakota which is in the cattle country does so. Because the cattle will not abide red if it be at all bright in hue. The recent experience of a Minneapolis owner who made a trip through the cattle country with a red car is cited as an example of what trouble erubescent shades of finish will get a driver into if he braves appearance among live beef on the hoof. The experience befell A. A. Hanson, who has a local reputation for veracity, and whose car after a trip in the Dakotas came back looking a battered wreck of its former self.

"We set out for a pleasure trip," says Hanson, "and for five days it was a pleasure trip. Then after leaving Washburn, N. D., we struck the cattle country of the plains. We were speeding across the prairies for the South Dakota borders when we got our first note of warning. The note of warning was the bellow of a bull. Looking up, I saw a 2,000 pound monster in close pursuit of our machine. He was bellowing and snorting, and I opened up on the high speed. For some time I didn't know what was the matter. I cut out the muffler in an effort to scare him away, but he came on faster and faster. Then I tumbled. The bull had spotted the bright red of our machine, and if he ever caught us there would be telegrams to Minneapolis.

"I never believed much in dodging, but I started it then and it worked. For just six days we dodged in and out of the cattle herds of North and South Dakota. When I was a kid I played a good game of prisoner's base and I want to tell you the knowledge came in handy.

"We had several narrow escapes, but I won't particularize. That gouge in the red paint on the rear end of the car was made by an infuriated heifer ten miles east of Bismarck. A brindle cow took off that front fender five miles from the State line at Big Stone. That spot in the tire is where we hit a yearling near Ortonville.

"I have always fancied red automobiles but they will not do in the Dakotas."

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Standard Detachable Rim

Resolution passed by the NATIONAL ASSOCIATION OF AUTOMOBILE MANUFACTURERS at a meeting held in New York, August 5th, 1908.

"Whereas, the Standard Universal Rim, described in the report of "the Special Rim Committee, has been recommended by the committee "as mechanically satisfactory, be it

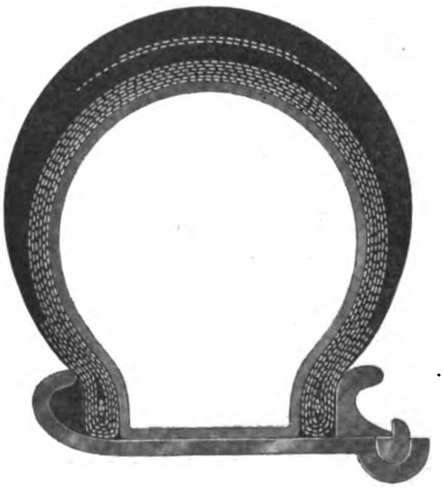
"RESOLVED that this association hereby adopts the rim so de- "scribed as standard, subject to the consummation by the Special Rim "Committee of satisfactory commercial arrangements with the patentee "and manufacturers."

At the above meeting all the detachable rims now on the market as well as proposed new rims were carefully considered.

THIS IS THE RIM



Standard Rim as Used for Clincher Tires



Standard Rim as Used for Dunlop Tires

Hartford Rubber Works Co.
Hartford, Conn.

Morgan & Wright
Detroit, Mich.

G & J Tire Co.
Indianapolis, Ind.

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The Mitchell

The car you can afford to buy and KEEP

$2000

The Mitchell appeals to you, Mr. Business Man, because it gives you just as much **pleasure**—just as much and as **good service**, is just as **stylish** and neatly **finished** as any car, and doesn't cost you a small fortune to **buy**—or **keep**.

The Mitchell at $2,000 is the standard automobile value.

Prove it—Mr. Business Man.

Get **demonstrations** of the extravagantly high-priced cars—and then try the **Mitchell** over the **same** route.

The Mitchell agent will be glad to take you out if you're interested for 50 or 100 miles any time you say. Call him up (it places you under no obligation)—**Challenge** him—

Just say, "Show Me."

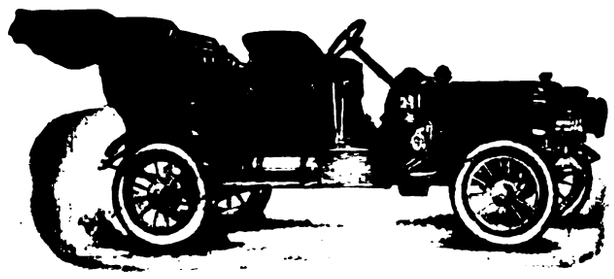
He'll come around with a car and show you a "silent argument" that will get your order or he will retire without a word.

Our catalog No. 18 is fully descriptive of the Mitchell 1908 Touring Car $2,000—Limousine $2,800—Roadster $1,250, and Runabout $1,000. Write for it—we'll also send letters from users, proving the Mitchell to be the most economical car to **operate**.

Mitchell Motor Car Co., 286 Mitchell Street, Racine, Wis.

Standard Manufacturers, A. M. C. M. A.

This car—shown here—35 h. p., 4 cyl., speed 50 miles, finished in Mitchell blue—price $2000—is excellent throughout—the car you ought to have at the price you ought to pay.



"Solar Lamps Invalnable"

Says Schuster, Driver of Thomas Car, New York-Paris Race.



August 18, 1908.

BADGER BRASS MFG. CO.

Gentlemen: It may interest you to know that from the time we left New York until we reached Paris our Solar Lamps gave absolute satisfaction, in fact, they were invaluable! Meeting the worst possible road and weather conditions both in America and Siberia, they did their work in the most satisfactory manner and at no time did they give us any trouble. I consider them to be the best automobile lamp made. Yours truly, George Schuster

BADGER BRASS MANUFACTURING CO. 606 Lyman Avenue KENOSHA, WIS

A Prominent Publisher of the South

has just written us of his own accord:

"Your car (one of our four cylinder Model Rs) did not give me a particle of trouble of any description in a journey which reached 1,500 miles. The machine is all right in every respect and chugged as sweetly yesterday afternoon when I came into Baltimore as it did when I left."

An important point to remember: The Model R 20 horsepower is an old car—we have discontinued making them.

Stevens-Duryea Quality

—lasting quality—is emphasized in every model we have produced and are producing.

Model X Four Cylinder, $2,750
Model U Light Six, - - $3,500

Send for latest catalogs.

STEVENS-DURYEA CO. Chicopee Falls Mass., U. S. A.

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The Week's Patents.

891,552. Igniter. Charles B. King, Detroit, Mich., assignor to Northern Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed June 9, 1906. Serial No. 321,036.

1. An igniter comprising a casing having a nipple at one end for detachably engaging the engine cylinder and two upwardly extending nipples, a priming cup engaging the outer one of said upwardly extending nipples and a spark plug engaging the intermediate nipple.

891,557. Ring of Removable Mail Covers for Pneumatic Tires. Salvatore A. Marazzani, Palermo, Italy. Filed Nov. 4, 1907. Serial No. 400,643.

1. In a removable mail cover for pneumatic tires of automobile wheels, two series of rings constituting alternately the cover, one of the series being formed of greater rings of flattened rectangular section and of slightly concave shape, the other series being formed of smaller rings of circular section.

891,578. Tire Armor. Horace G. Wheeler, Canandaigua, N. Y. Filed Oct. 30, 1906. Serial No. 341,213.

An armor for rubber tires comprising an annular shell having a series of pairs of oppositely disposed plates hinged to its side edges, each plate being provided with a tongue extending radially inwards therefrom, a block between the free ends of each pair of tongues and provided with a threaded opening, a threaded sleeve slidable in said opening, a rod slidable through said sleeve and projecting therebeyond at opposite ends, a thumb-screw secured to the outer end of said sleeve and provided with an axial opening through which said rod passes, a shoe secured to the inner end of the rod, and a coil spring carried by the rod and bearing against said shoe and the adjacent end of said sleeve.

891,607. Shock Absorber. Frank Doront, Paterson, N. J. Filed Sept. 25, 1907. Serial No. 394,452.

1. In combination, two supporting members pivotally connected together, each of said members comprising two substantially parallel arms arranged alternately with the arms of the other member at the pivotal point, means intermediate each arm of one member and a corresponding arm of the other member for offering a resistance to the movement of said members, and resilient means for forcing said arms and resistance means into engagement with each other, one arm of each of said members presenting a cam surface at the pivotal point for varying the tension of said resilient means and varying the resistance.

891,623. Engine Starter. Clayton B. Lazenby, Chicago, Ill. Filed Aug. 7, 1907. Serial No. 387,490.

1. In a motor vehicle, an engine having a shaft, a collar rotatably mounted upon said shaft, steering mechanism, means for rotating said collar from said steering mechanism, and independently operated means for locking said collar to said shaft.

891,638. Water Injector for Internal Combustion Engines. Alfred G. Scholes, Ilford, and George Gibson, Westminster, England. Filed Jan. 18, 1908. Serial No. 411,539.

1. An appartus for injecting water into the cylinder of an internal combustion engine operated by the force of the explosion in said cylinder, comprising a cylinder open to the working cylinder of the engine, a piston working in said cylinder, a small force pump the ram of which is operated by said piston, suction and delivery ports for the pump fitted with non-return valves, the outlet of the delivery port terminating in the cylinder of the apparatus at or near the open end thereof so that said outlet is closed by the piston of the apparatus when said piston is at the end of its stroke at the open end of the said cylinder, as set forth.

891,655. Vehicle Wheel. Thomas A. Baker, Renick, Mo. Filed April 2, 1907. Serial No. 365,978.

1. A vehicle wheel provided with a cushioning element interposed between the wheel rim and the hub, a tire secured to the rim approximately centrally thereof and consisting of a series of closely abutting blocks strung upon a flexible member, and a mud guard detachably secured to each side of the wheel rim and each of which is of a diameter equal to the diameter of the tired wheel.

891,682. Spring Wheel. Giuseppe Ferrando, Genoa, Italy. Filed Feb. 8, 1906. Serial No. 300,196.

1. In a spring wheel, the combination of an inner rim, a band surrounding the inner rim, and provided along opposite edges with inwardly extending flanges which embrace the inner rim, and also with outwardly extending flanges, a series of bolts connecting the oppositely disposed, outwardly extending flanges, an outer rim spaced from the inner rim, and a series of coil springs having their outer ends pivotally connected to the outer rim while their inner ends are pivotally connected to the above mentioned bolts joining the outwardly extending flanges upon the above mentioned band.

891,697. Radiator Fan for Motor Vehicles. Russell Huff, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed March 26, 1907. Serial No. 364,724.

1. In an adjustable fan support, a bracket having a clamp, a threaded stem within said clamp, said stem having a fan spindle connected therewith and said clamp and stem having keyways, a key fitting within said keyways, and a split sleeve or bushing interposed between said spindle and clamp.

891,767. Power Device for Moving Automobiles. Benjamin J. French, Brighton, Colo., assignor of one-half to Emmet A. Bromley, Brighton, Colo. Filed Oct. 1, 1907. Serial No. 395,421.

1. In a device as specified, the combination with a vehicle having a motor driven shaft, of draw bars secured to the vehicle at one end, their opposite ends being hooked to engage the said shaft, bearings upon said draw bars; a shaft slidably mounted in the bearings, having a clutch on one end; a shaft having a clutch in line with the first mentioned clutch; a sprocket wheel on said shaft, a sprocket wheel on the motor-driven shaft, and a chain connecting said sprocket wheels; a drum on the slidable shaft; a cable on said drum having an anchor upon its free end; depending guide rollers secured to the vehicle adjacent to the drum; discs secured upon the slidable shaft; a lever pivoted at one end and extending between said discs, for shifting said shaft, and means for holding said shaft either in an operative or an inoperative position, relatively to the power driven clutch.

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15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

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SIDE-WIRE SOLID MOTOR TIRES
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ARE GOOD TIRES

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Its records and the opinions of its users speak more loudly than self praise. Agencies for 1909 are being closed rapidly. Much good territory still open.

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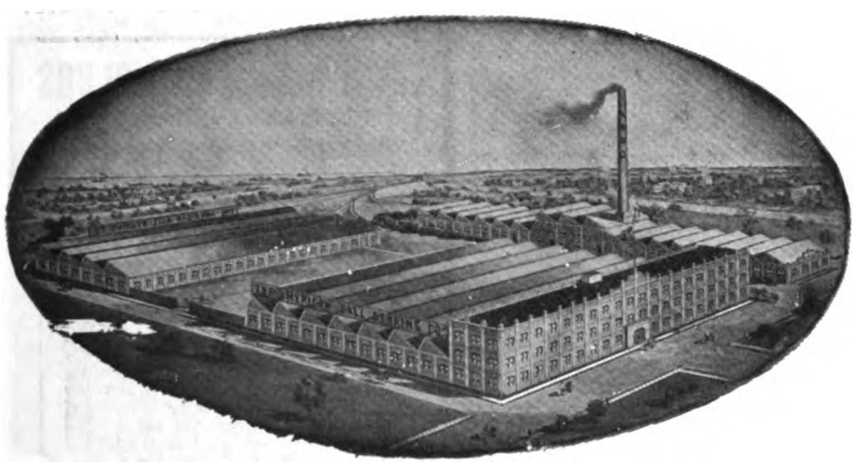
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Touring Car, Fully Equipped,	"Flying Roadster," Fully Equipped,	6-Cylinder, 130-inch Wheel Base,
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OLDS MOTOR WORKS, Lansing, Mich., U. S. A.
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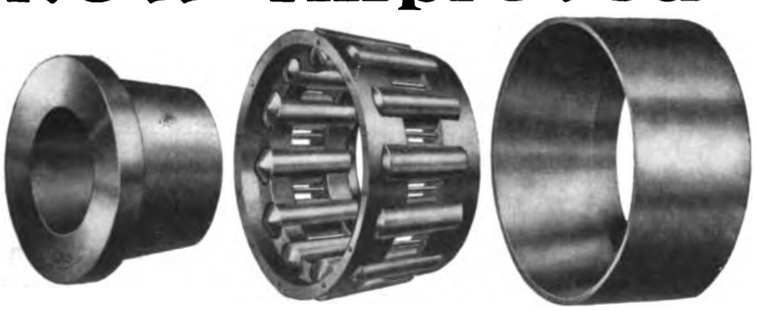


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¶ Possesses many distinctive features and is meeting with marked approval by designers and engineers.

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¶ If every driver had to ride in his own tonneau, every car would be quickly equipped with Supplementary Spiral Springs. Owners are not intentionally selfish—many of them just thoughtless. Usually driving or sitting beside the driver, the riding qualities of the tonneau are to them practically unknown.

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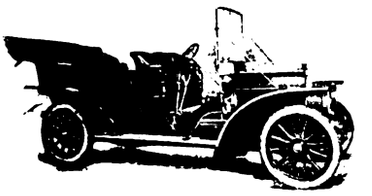
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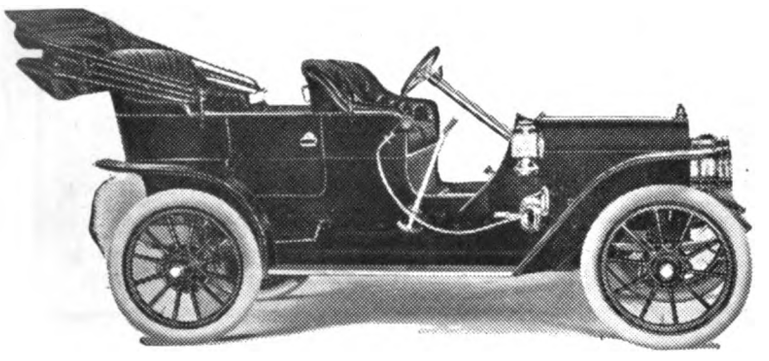


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Licensed under Selden Patent.

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Model B Touring Car, price $1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, $75.00 extra. Runabout, $1,300.

¶ A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

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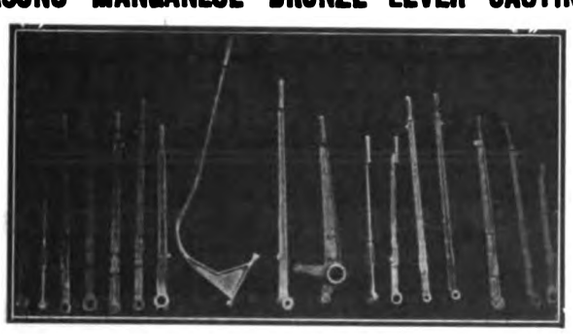
Trusting this letter may be of benefit to you, I remain, Yours very truly, (Signed) JOSEPH A. WEBBER, Lieut., Aide to Chief.

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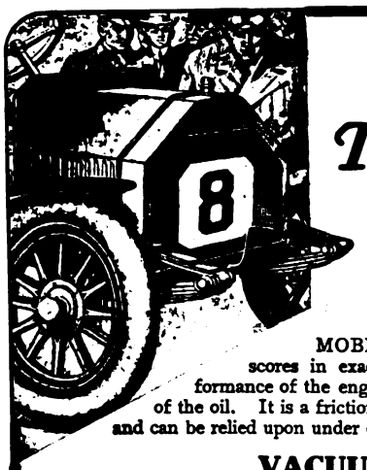
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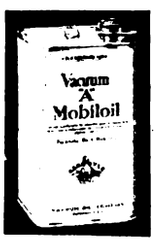
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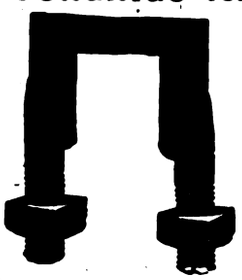
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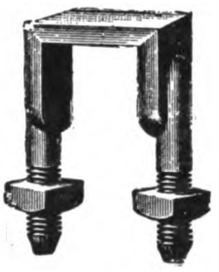
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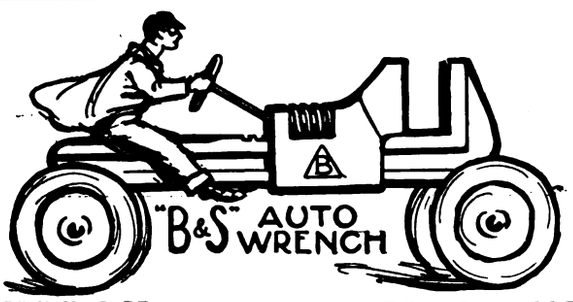


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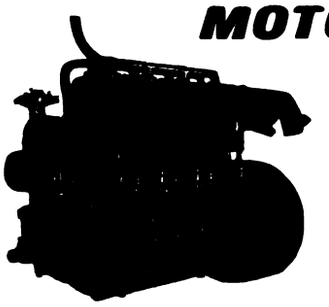


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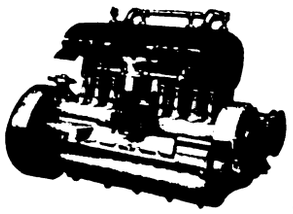
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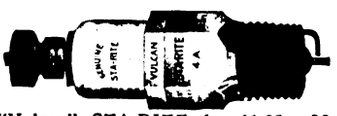
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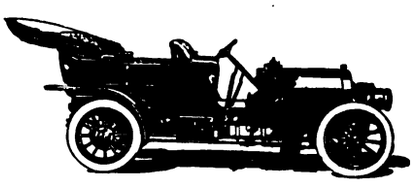
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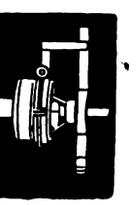
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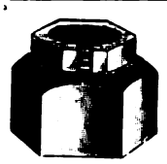
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Address L. G. Lewis, G. P. A., Detroit.

Detroit & Buffalo Steamboat Co.
PHILIP H. McMILLAN, VICE PRESIDENT.
A. A. SCHANTZ, GEN'L MANAGER.

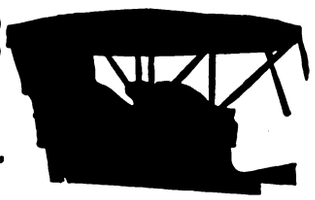
The PULLMAN
4-40 Roadster. Price, $3,000.
that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.
YORK MOTOR CAR CO., York, Pa.

The Acme
JUSTIFIES ITS NAME
THE ACME MOTOR CAR CO.
Reading, Pa.

MICHELIN

MICHELIN TIRE COMPANY
MILLTOWN, N. J.

SPRINGFIELD TOP (Pat. 1895)
Aluminum Bodies
SPRINGFIELD METAL BODY CO.,
306 Birnie Ave.,
Springfield, Mass.



THE GYROSCOPE CAR
The Simplest Automobile in the World.
Address the
GYROSCOPE AUTOMOBILE CO. (INC.)
Gyroscope Bldg.,
231 West 54th St. New York City.



Steel Tires
Full of Air.
Tire expense cut in two.
Cannot Blow Out, Rim Cut or Puncture.
As Flexible as Rubber
Anti-Skid.

That part of a tire with a blowout or a rim cut in it will last longer than any other part if encircled by a few sections of steel.

Thousands in use.

Kimball Tire Case Co.
172 Broadway
Council Bluffs, Iowa

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

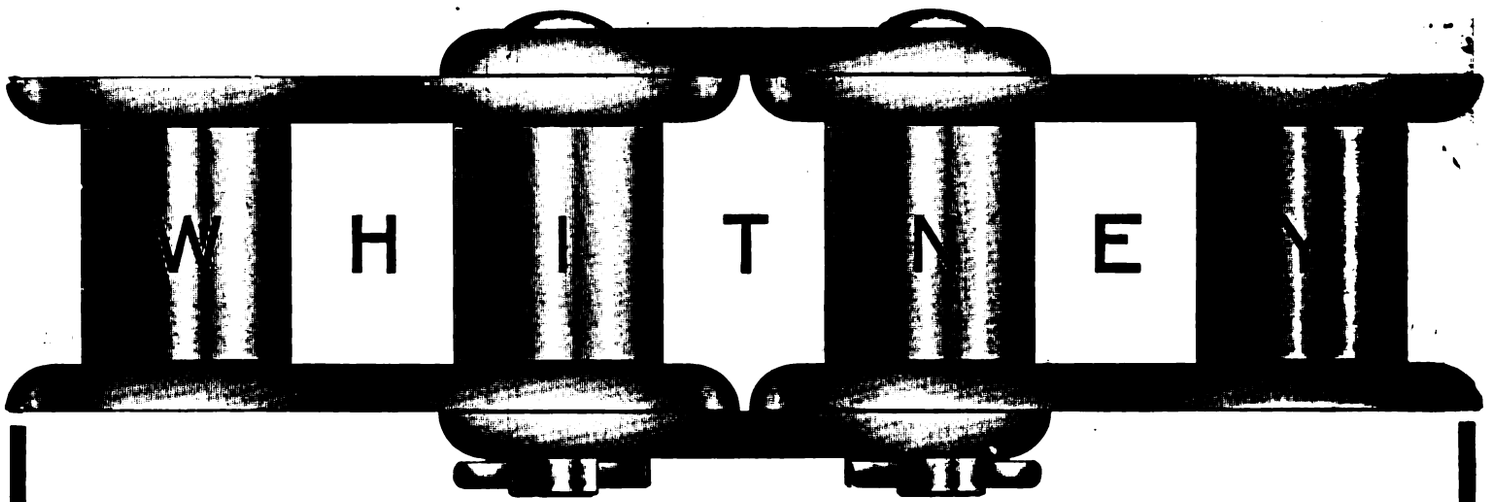
Enclosed find $2.00 for which enter my subscription to
The Motor World
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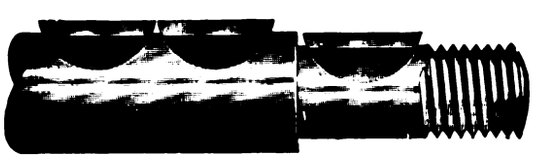
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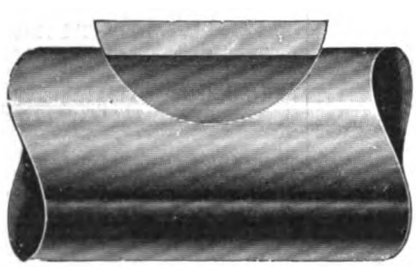


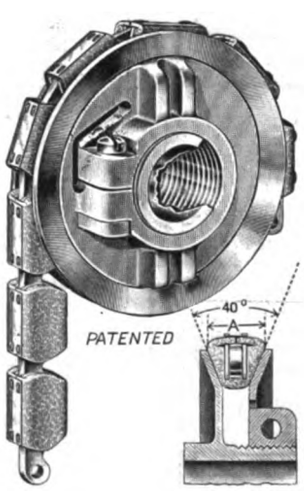
"Whitney" 1909 Model Chains and Prices

ARE NOW READY

All Motor Car Manufacturers should get full particulars before closing, as we have made great gains in strength and durability. With certain sizes of chain we have gained over 100% on earlier models.







New "Whitney" Chain Belt

FOR

Cooling Fans, Oiling Devices, Motorcycles, Etc.

If you are not taking advantage of the Woodruff Patent System of Keying it will pay you to investigate.

Better results and a great saving in cost.

We carry 95 regular sizes of Keys and Cutters in stock for immediate delivery.

THE WHITNEY MANUFACTURING COMPANY

Hartford, Connecticut

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Volume XVIII New York, N. Y., U. S. A., September 24, 1908 Number 26

THE MOTOR WORLD

A trade paper giving the World's Motor News

Ten cents a copy—
Two dollars a year



'09 MODELS
Now being exhibited and delivered

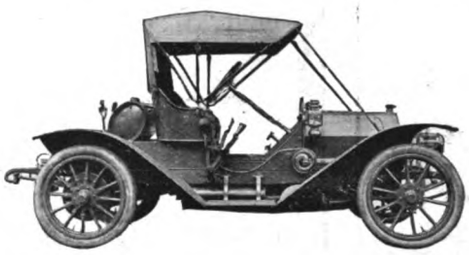
PALMER-SINGER

All Cars Are Licensed and Guaranteed

Sold by us Under Selden Patent for One Year.

'09 MODELS
Now being exhibited and delivered

Nickel steel used to secure lightness and strength. Imported F. & S. ball bearings exclusively. Bosch high tension magnetos and multiple disc clutches. Drop forged I beam front axle—four-speed selective type, sliding gear transmissions with direct drive on third speed. All brakes equalized, all expanding type and on rear wheels. Universal joints on all steering connections. All types shaft driven, all moving parts enclosed in dustproof cases.



Palmer-Singer Four-Thirty "Skimabout," 4 Cylinders, 30 H. P., $1950, equipped except top.

PALMER & SINGER MFG. CO.

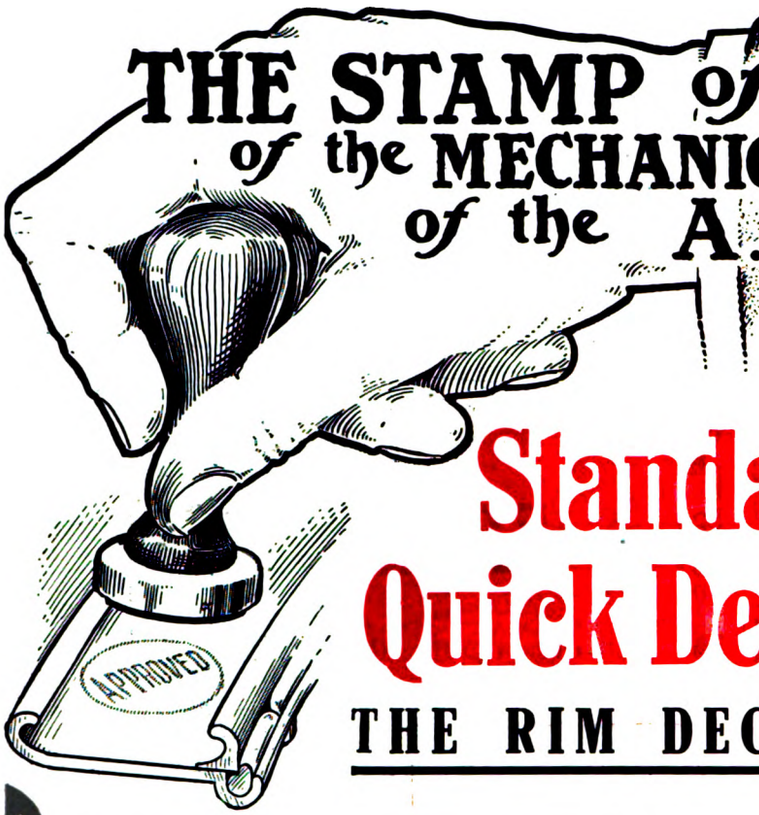
1620-22-24 Broadway, New York

1321 Michigan Ave., Chicago

Sole Distributers of The SIMPLEX.

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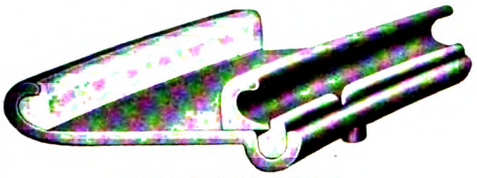
THE STAMP of APPROVAL of the MECHANICAL BRANCH of the A.L.A.M.



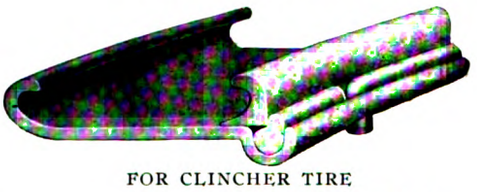
THE Standard Universal Quick Detachable Rim

THE RIM DECIDED ON FOR 1909

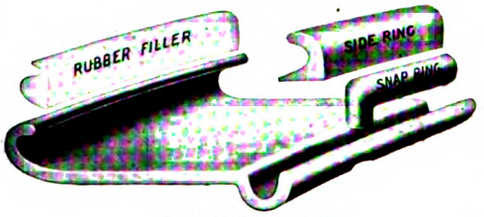
The cuts show the simplicity of operation and the mechanical worth of the rim.



FOR DUNLOP TIRE



FOR CLINCHER TIRE



RIM AND PARTS

¶After two years of consideration, the automobile manufacturers have chosen the Standard Universal Quick Detachable Rim as the most desirable of all the rims shown to be the standard equipment for American cars as soon as this change can be conveniently brought about. Its adoption signifies its perfection.

¶ There are only two parts to remove—the side ring and the snap or locking rim. Accommodates all standard sizes of tires, Clincher or Dunlop. To insure standard equipment all around, specify

Hartford Tires AND Standard Universal Quick Detachable Rims

THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831 Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.

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TIME WAS when tire worry spoiled much of the enjoyment of motoring and the motorist who footed the bills had no voice in the matter.

THEN CAME THE AJAX wrapped tread tire with its superior services.

AND NEXT THE AJAX 5,000 MILE GUARANTEE —If the user of Ajax tires fails to obtain 5,000 miles service from his tire, it is for us to worry—not him, and we make good.

WITH AJAX TIRES the tire problem resolves itself into a plain proposition. We know that they will do, and we offer you the best kind of an insurance for expressing your willingness to find out for yourself.

IS THERE ANYTHING MORE BUSINESS-LIKE THAN THIS?

Write for copy of Guarantee, stating what size tire you are using.
Address Dept. A.

AJAX-GRIEB RUBBER COMPANY
GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York
Factories: Trenton, N. J.

BRANCHES:
New York, 1776 Broadway — Denver, 1529 Cleveland Place
Boston, 819-a Boylston St. — Seattle, 1102 Broadway
Chicago, 1418 Michigan Ave. — San Francisco, 460 Golden Gate Ave.
Detroit, 743 Woodwood Ave. — Los Angeles, 1040 S. Main St.
Agents in all large cities.

THE
SELDEN
CAR
FOR 1909

Enters upon its second year with a clean record. No "first year" car has ever earned a better reputation or made a better showing.

THE CAR OF MODERATE PRICE
$ 2 0 0 0

Touring Car — Roadster
Limousine — Landaulet

4 cylinder, 28-30 horsepower, shaft drive, selective transmission, metal body, pressed steel frame, excellent hill climber, fine finish and style, roomy tonneau, luxurious upholstery, easy riding, smooth running, economical in up-keep, in fact, a high grade car in every particular.

The "Silent Selden"

1909 MODELS READY IN SEPTEMBER

Agency propositions now ready. Send for catalog and specifications.

Selden Motor Vehicle Co.
ROCHESTER, N. Y.
Member A. L. A. M.

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The Glidden 1908 tour was won on

Timken Roller Bearings

Foremost among the winners were the three cars composing the Peerless Team, all of which finished the 1700 miles running with clean scores. All three were equipped with **Timken Product.**

Timken Roller Bearings on Axles, Steering Knuckles and Transmission Gears

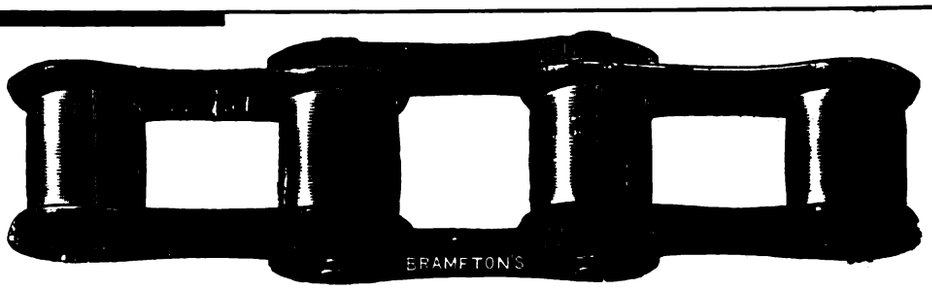
reduce friction to zero, take up load and end thrust—prevent resistance to engine—save wear and tear on every working part and make perfect scores possible.

The best cars of every make have **Timken Roller Bearings.** There is a reason. Let us give it to you.

THE TIMKEN ROLLER BEARING AXLE COMPANY, Canton, Ohio

Branches: 10 E. 31st Street, New York. 429 Wabash Avenue, Chicago.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides of the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement. THE BRAMPTON CHAIN is made of self-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like **THE CELEBRATED BRAMPTON CHAIN** because some of the other chain makers began to copy the design and shape of the **BRAMPTON CHAIN** links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the **BRAMPTON CHAIN** than ever before. These chains somewhat resemble the **BRAMPTON** in appearance, but the manufacturers of such chains have been unable to copy the material —self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the **BRAMPTON MOTOR CHAIN** in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the **BRAMPTON FILLS THE BILL,** and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size. We have in stock chains to fit all American and foreign cars.

YOUR 1909 CAR

You can have the new car that you order fitted with the **CELEBRATED BRAMPTON CHAIN** if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

Manufacturer, Jobber, Exporter and Importer

CHAS. E. MILLER, Main Office: 97-99-101 Reade Street, New York

BRANCHES: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Broad St., Philadelphia, Pa. 227½-229 Jefferson Ave., Detroit. 1829 Euclid Ave., Cleveland, O. 1392 Bedford Ave., Brooklyn, N. Y. 824 Main St., Buffalo.

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The Car You Can Afford to Buy and Keep

is the Mitchell.

—Because it is moderate in price ($1,000 to $2,800).

—Just as stylish, handsome and well finished as any car.

—And is perfect in each detail of construction.

—Doing just as well on the road and standing up to wear and tear just as well as the extravagantly high-priced cars.

Know this for yourself, Mr. Business Man.

Get demonstrations of the high-priced cars.

Then form your opinion in a demonstration of the Mitchell.

The Mitchell agent will be glad to take you out for 50 or 100 miles any day.

Call him up—you are placed under no obligation.

$2000

Just say "Show Me"

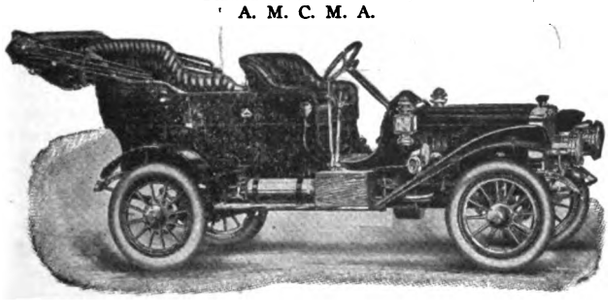
He'll answer with the car—show you a "silent argument" that will convince you.

Write for letters proving that the Mitchell is the most economical car to operate, and for catalog No. 18, picturing and describing the Mitchell Touring Car $2,000, Limousine $2,800, Roadster $1,250, and Runabout $1,000.

Touring Car shown here—5 passenger, 35 h. p., 4 cylinder, speed 50 miles, finished in Mitchell blue—a very neat and extremely desirable car from radiator to tail light.

Mitchell Motor Car Co., 286 Mitchell St., Racine, Wis.

Standard Manufacturers,
A. M. C. M. A.





New York to Paris Race Impossible Without Weed Chains

August 21, 1908.

Weed Chain Tire Grip Company:

Gentlemen:--The road conditions in the New York to Paris Race made travel an impossible task without the use of Weed Chains on our tires. We struck, snow, ice, mud, slush--everything. In some places we would not have made two miles a month without chains. In fact I do not believe our winning Thomas, or any other car would ever have seen Paris if it had not been for your equipment. Outside of preventing lost traction they saved us time and again from accident--and possible destruction.

GEORGE SCHUSTER.

Weed Grips positively prevent slipping and "skidding". They grip and hold the wheels in muddy going or on the steepest hills. They made the crossing of America and Siberia possible. They are as indispensible to your car, as they were to the victorious Thomas.

Weed Chain Tire Grip Company

35 Moore Street, New York

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Standard Detachable Rim

Resolution passed by the NATIONAL ASSOCIATION OF AUTOMOBILE MANUFACTURERS at a meeting held in New York, August 5th, 1908.

"Whereas, the Standard Universal Rim, described in the report of "the Special Rim Committee, has been recommended by the committee "as mechanically satisfactory, be it

"RESOLVED that this association hereby adopts the rim so de- "scribed as standard, subject to the consummation by the Special Rim "Committee of satisfactory commercial arrangements with the patentee "and manufacturers."

At the above meeting all the detachable rims now on the market as well as proposed new rims were carefully considered.

THIS IS THE RIM



Standard Rim as Used for Clincher Tires



Standard Rim as Used for Dunlop Tires

Hartford Rubber Works Co.
Hartford, Conn.

Morgan & Wright
Detroit, Mich.

G & J Tire Co.
Indianapolis, Ind.

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Mongrel or Thoroughbred?

NOW IS THE TIME for you, Mr. Thoughtful Dealer, to decide what you will sell in 1909.

WILL IT BE A MONGREL? a car assembled from parts carried together from all over the country and hammered into shape as well as may be?

OR WILL YOU SELL THE THOROUGHBRED—a homogeneous mechanical masterpiece, every single part of which is the result of the same genius that devised the whole?

"ASTOUNDING," "MARVELOUS," "WONDERFUL," are the terms with which some assembled cars are now tagged, though they are astounding, marvelous and wonderful only to the assemblers, who like Rip Van Winkle, have been dozing in the growing woods of automobiledom and who now, bewildered by the progress that has been going on, seize upon time-tried and long-established practices and herald their adoption by the assemblers as brand-new discoveries.

LET'S REASON IT OUT: On the one hand you have the assembled car, with an engine bought from one manufacturer, a frame from another, and a transmission from a third, and so on down to the last rivet. The maker of the engine, the mill in which the frames are pressed, the transmission man, all derive their separate profits, leaving no other way to the assemblers to obtain their rewards than by skimping the quality of their "product."

AND THEY DO IT—THEY MUST! When you examine some of these astounding cars you will be truly astounded on finding that the four-cylinder engine is cast in one piece and has only two main bearings, whereas the Maxwell has four cylinders and five main bearings. You know well enough that making a motor with only two bearings is equal to leaving the engine to its own devices as far as alignment is concerned.

IT WILL BE A TOUGH JOB FOR THE DEALER to convince the purchaser who is wise that some four-cylinder engines of small dimensions will develop as high as 30 horsepower—because they can't.

MAXWELLS ARE A HOME-GROWN AMERICAN PRODUCT. The use of Maxwell features in Maxwell cars was neither a heaven-given inspiration nor the aping of foreign design, but the outcome of sound engineering sense.

WHEN 10,116 MAXWELL OWNERS testify to the excellence of their cars, all of which have been sold by Maxwell dealers, then the Maxwell proposition is one that you can't afford to pass by.

BEFORE HITCHING YOUR WAGON TO A STAR it will be wise for you to find out all about a dealership for Maxwells, the success of which is past and present, instead of lying in the dark and distant future that has swallowed so many wonderful cars that have been marvelous chiefly in their complete and rapid disappearance from the field of legitimate competition.

Benj. Briscoe

President.

MAXWELL-BRISCOE MOTOR CO.

Standard Manufacturers A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

Address communications to Tarrytown, N. Y.



LAMPS AGAIN "SHOW THE WAY" TO VICTORY

Perfect lighting equipment played an important part in the

GREAT BRIGHTON
Twenty-Four Hour Race

The two winning Lozier Cars both lowered the existing World's Records —the "Big Six" covering 1,107 miles —the "Four" 1,092 miles.

Says the Lozier Motor Company:

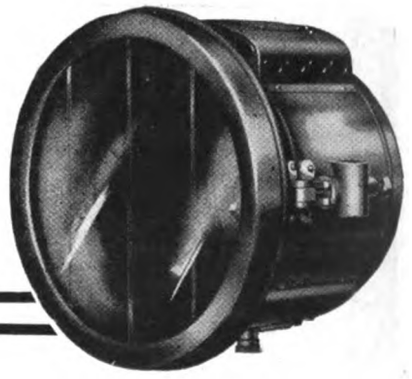
"Solar Lamps lighted the way for the two Lozier cars in the great twenty-four hour Brighton Beach Victory. Lozier Big Six 1st, Lozier Four cylinder 2d. Both cars breaking existing world's records and defeating best cars of America and Europe."

On all the best cars you will find the best lamps—SOLARS.

Catalog upon request.

BADGER BRASS MFG. COMPANY

606 Lyman Ave.
KENOSHA, WIS.



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MR. DEALER:



"Keep your eye on Continentals"

READY
New
AND
Lower
Prices

FOR

Continental TIRES

AND

Demountable Rims

For exclusive territory and special agency offer write us or our distributing agents.

CONTINENTAL CAOUTCHOUC COMPANY

Home Office: 1788-90 Broadway, New York City. **J. M. GILBERT, Gen. Mgr.**

BRANCHES: Detroit, 226 Jefferson Avenue. San Francisco, 422-4 Van Ness Avenue.

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Centaur Motor Co., 59 Franklin St., Buffalo, N. Y.
Martin-Evans Co., 1186 Bedford Ave., Brooklyn, N. Y.
Excelsior Supply Co., 237 Randolph St., Chicago, Ill.
Jas. L. Gibney & Bro., 211 N. Broad St., Phila., Pa.
Newstadt Automobile & Supply Co., 3948 Olive St., St. Louis, Mo.
Plant Rubber Co., 322 First Ave., North, Minneapolis, Minn.
Revere Rubber Co., 700 Baronne St., New Orleans, La.
Sammis & Downer Co., Huntington, L. I.
The Post & Lester Co., 821 Boylston St., Boston, Mass.
The Post & Lester Co., 175 Asylum St., Hartford, Conn.
Western Continental Caoutchouc Co., 1438 Michigan Ave., Chicago, Ill.

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"Firestone"

Resolution

It is Resolved: That during the coming year we will increase our already established reputation as makers of Superior Quality Pneumatic Tires. It is further resolved that we will not allow the High Quality of Firestone Tires to depreciate but instead will put forth our greatest efforts to make them better than ever before.

Our Ability to carry out this resolution is backed by the finest equipped and largest exclusive tire factory in the United States, operated by an organization where every man on the pay roll is a producer and knows his business.

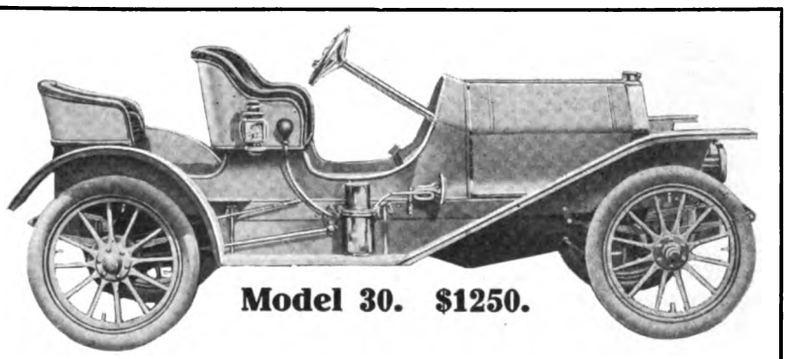
FIRESTONE TIRE & RUBBER CO.

Main Office and Factory
Akron, Ohio

Branches and Agencies
Almost Everywhere

1909 Overland

"ONLY PEDALS TO PUSH"



Model 30. $1250.

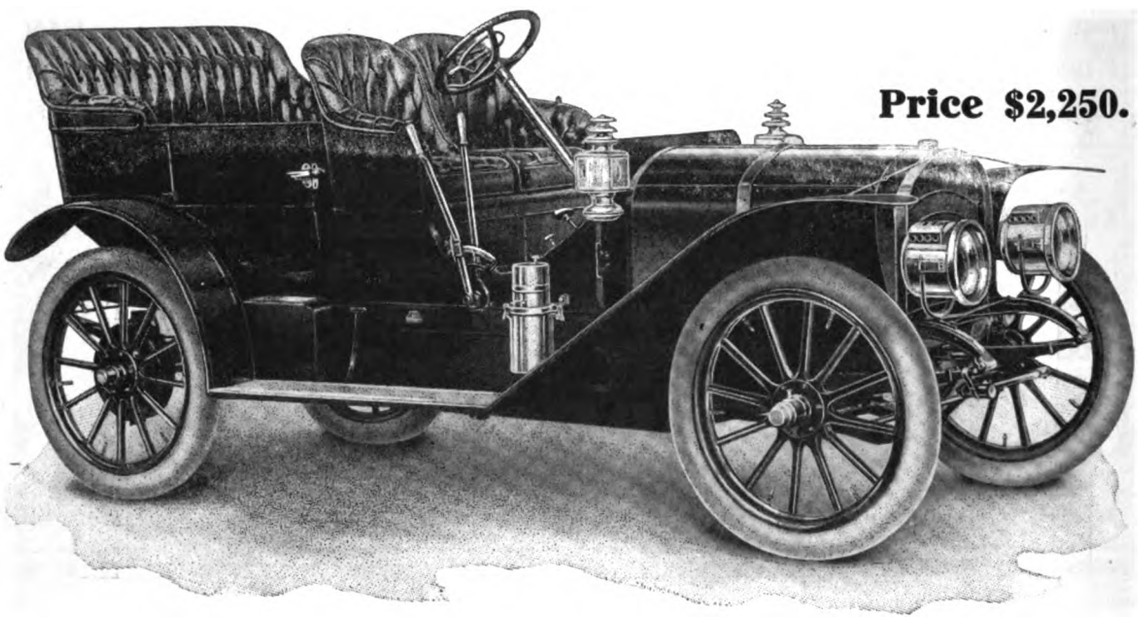
The Simplest The Neatest The Quietest
The Most Reliable The Most Fully Equipped The Cheapest
Roadster on the 1909 market.

WRITE FOR SPECIFICATIONS TO

OVERLAND AUTOMOBILE COMPANY, Indianapolis, Indiana

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Rambler



Price $2,250.

THE ADVANTAGES OF THE OFFSET CRANK SHAFT

Here is a simple explanation of the offset crank shaft, the great power developing feature of the Rambler.

Notice a man about to mount a bicycle. He always adjusts the pedal in that position where it will receive to best advantage his full weight on the first downward stroke. The best position for the pedal is just slightly forward of the center of the crank shaft on the bicycle. If he mounted when the pedal was directly over the center of the crank shaft, his weight would fall directly on the bearings and the first downward stroke would be retarded and, therefore, weak.

Now imagine the man's leg as the piston of an automobile engine; the pedal of the bicycle as the crank pin and the crank shaft of the bicycle as the crank shaft of the engine. In the ordinary engine the crank pin and piston (the pedal and the man's leg) are directly over the dead center and until the crank passes the turning point all effort is wasted. Thus, when the explosion occurs, the greatest force falls upon the bearings.

In the Rambler engine at the instant the explosion occurs above the piston the crank pin has moved past the dead center; the crank shaft is in a position to receive the full pressure and turns without friction. Consequently there is no side thrust of the piston and wear on the cylinder walls is thus saved.

Try this Rambler on the hills and notice how steadily and powerfully it pulls when running under load.

Tell our nearest representative to call at your home and take you to your place of business in a Rambler.

THE CAR OF STEADY SERVICE

Thomas B. Jeffery & Company, Main Office and Factory: **Kenosha, Wis.**

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

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THE MOTOR WORLD

Volume XVIII. New York, U. S. A., Thursday, September 24, 1908. No. 26

ORDERS OLDS'S LICENSE CANCELLED

Court Grants Motion Actuated by A. L. A. M.—Petition Suggests Why Buick Escaped Precent Action.

In response to the expressed desires of the Association of Licensed Automobile Manufacturers, the receivers of the Electric Vehicle Co., as owners of the Selden patent, lost no time in applying to the United States Circuit Court in Newark, N. J, for authority to cancel the license of the Olds Motor Works. The petition was promptly filed and on Tuesday last, 22d inst., the court signed the necessary order and as a result after a few formalities are complied with, the Olds company will cease to be a Selden licensee and a member of the A. L. A. M.

The Motor World's exclusive story that the A. L. A. M. had taken action to this end and also to sue both the Olds interests and the Buick Motor Co. for royalty arrears proved such startling news that it was not generally credited. At that time it was not plain why the movement to cancel Olds's license did not extend to Buick, but light apparently is shed on the situation by the petition filed in the Olds case. It discloses that under the terms of the agreement between the association and the Electric Vehicle Co. the former can demand the cancellation of the license of only one of its members each fiscal year, which license, upon vote of at least three-quarters of the members of the association, the company is required to cancel. The fiscal year being from October 1st to October 1st, it is obvious that within a very few days the licensed members will be in a position to demand the revoking of another license if they see fit.

In addition to citing this hitherto not generally known item in the agreement, the petition which was granted on Tuesday last set forth that the Olds Motor Works was granted a license under the Selden patent, subject to certain supplementary agreements with the A. L. A. M., among which was that the royalties under the patent should be paid promptly. The license itself also provides for prompt payment of royalty. It is alleged that the Olds Motor Works has not paid its royalties under the patent for the quarters ending January, April and July; the amount due is not known, as the Olds company has rendered no accounting for the periods. The petition further recited that on September 3 the A. L. A. M. by more than a three-fourths vote demanded that the Electric Vehicle receivers cancel the Olds license, and asked the court's direction in the premises.

As stated, the court signed an order directing the Electric Vehicle receivers to cancel the license, it being transmitted to the E. V. receivers, who in turn will make official notification to the Olds company.

Cook and Tweedy Join Federal.

Otis R. Cook, for many years with the Goodrich company and at present with the Firestone Tire & Rubber Co., Akron, Ohio, has engaged to become general manager of the tire department of the Federal Rubber Co., Cudahy, Wis., which department recently was established. Cook will move from Akron to Cudahy on October 1st. Osborne S. Tweedy, former manager of the Diamond branch in Chicago, also will join the Federal staff in the capacity of sales manager. The Federal company will manufacture tires of all sorts, both pneumatic and solid rubber, in addition to a full line of accessories.

New Buggy Company Adopts Old Name.

The Motor Buggy Co. has secured a factory on Columbia Heights, Minneapolis, Minn., and is scheduled to commence manufacturing operations on October 1, under the management of Superintendent Jacobson. In spite of the fact that the name "Acme" has had automobile employment elsewhere for some time, the concern promises to produce the Acme roadster, a buggy type machine of low price.

RECEIVERS ANTICIPATE CREDITORS

They Ask and Obtain Authority to Pay Another 25 per cent. Dividend—Six Claimants are Debarred.

Anticipating the pending motion of certain creditors, the attorney for the receivers of the Pope Mfg. Co. on Tuesday last, 22d inst., obtained from the Chancery Court of New Jersey, an order authorizing the receivers to pay to all creditors a third dividend of 25 per cent. The money will become available as soon as it is transferred from the various jurisdictions in which it reposes.

On the same day, the Chancery Court upheld the receivers in disallowing the claims of the B. F. Goodrich Co., Beech & Sweet, the Curtis-Williams Auto Co., C. M. Childs & Co., the Dodge Motor Vehicle Co. and Fickling & Co. Vice-Chancellor Howell entered an order which prohibits these concerns from appealing from the action of the receivers.

It is understood that the Pope receivers have effected a compromise with the Unzicker claimants and thereby removed another large obstacle to the final settlement of affairs. The Unzicker claim, as will be recalled, amounted to some $500,000 being the amount of an unexpired term, 17 years, of the lease of the former Western Wheel Works factory in Chicago.

While the New Jersey courts were busy with Pope affairs, the Federal Court in Indiana confirmed the sale of the Pope-Waverly plant in Indianapolis, which thereby will pass to the interests represented by H. H. Rice and Wilbur C. Johnson, the present managers of the plant. Their offer, the acceptance of which now is fully authorized, was $200,000. The monthly report of the receiver is filed with the petition, showing the receipts for August sales to be $29,800.36. The total receipts, which include a balance of $116,873.26 on hand August 1, were $146,-708.17. The expenditures were $18,024.85.

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The Week's Incorporations.

Corsicana, Tex.—American Motor Co., The, under Texas laws, with $6,000 capital.

New London, Wis.—New London Auto Co., The, with $5,000 capital. Corporators—A. Falkenhainer, W. J. Sader and H. R. Furst.

Philadelphia, Pa.—Penn Motor Car Co., under Delaware laws, with $100,000 capital. Corporators—J. H. Hughes, J. L. Wolcott, Dr. L. A. H. Bishop.

Dayton, O.—Auto Motor Mfg. Co., under Ohio laws, with $10,000 capital. Corporators—Frederick C. Nickol, Joseph Sherard, Frank Krause, Jacob Sammet.

Boston, Mass.—Kissel Kar Kompany, under Massachusetts laws, with $30,000 capital. Corporators—C. T. Small, Malden, Mass.; C. B. Stecker, Boston, Mass.

Boston, Mass.—Taxi Co., under Massachusets laws, with $200,000 capital; cab and truck business. Corporators—F. Tudor, Needham, Mass.; C. G. Whitcomb, Holbrook, Mass.

Wilmington, Del.—W-D Spring Cushion Tire Co., under Delaware laws, with $250,000 capital. Corporators—E. E. Walton and C. R. Hill, Philadelphia, Pa.; H. W. Davis, Wilmington, Del.

Brooklyn, N. Y.—De Shaw Motor Co., The, under New York laws, with $10,000 capital. Corporators—Frank H. Clark, S. W. Bates, Charles De Shaw, Walter E. Vogt, Brooklyn, N. Y.

Newark, N. J.—Pope Hartford Automobile Co., under New Jersey laws, with $50,000 capital; to manufacture automobiles. Corporators—Benjamin C. Fincke, Henry E. Holt, Charles A. Dickson.

Bridgeport, Conn.—Aston Motor Car Co., The, under Connecticut laws, with $10,000 capital; to manufacture, rent, repair and deal in automobiles. Corporators—T. R. Aston, M. A. Hall, G. E. Morton.

Newark, N. J.—Owners' Repair & Maintenance Co., under New Jersey laws, with $10,000 capital; to manufacture automobiles. Corporators—S. Raymond Clark, William L. Du Radway, Russell B. Matthews.

New York City, N. Y.—Frawley Taxi Co., under New York laws, with $100,000 capital; to manufacture, rent, sell and store automobiles, etc. Corporators—P. J. Frawley, H. Kellersohn, P. L. Kiernan, New York City, N. Y.

Chicago, Ill.—North Shore Garage, under Illinois laws, with $5,000 capital; to manufacture, repair and deal in automobiles and automobile parts. Corporators—John F. Fisher, A. K. Jorgensen, William E. Nelson.

Newark, N. J.—United Automobile Dealers' Association, under New Jersey laws, with $20,000 capital; to manufacture automobiles. Corporators—S. Raymond Clark; William L. Du Radway, Russell B. Matthews.

Buffalo, N. Y.—Chester Auto & Tire Filling Co., under New York laws, with $50,000 capital; to manufacture compounds for filling rubber tires. Corporators—T. Chester, Sudbury, Pa.; A. J. Chester, H. C. Harrison, Buffalo, N. Y.

Camden, N. J.—James Leckie & Son Co., The, under New Jersey laws, with $250,000 capital; to manufacture and deal in gas, gasolene engines and automobiles. Corporators—Frank R. Hansell, John A. MacLeod, George H. B. Martin.

Trenton, N. J.—Textile Rubber Co., under New Jersey laws, with $50,000 capital; to manufacture fabrics for automobile tops, etc. Corporators—A. W. Ireland, New York City; N. Y.; F. E. Sincere, Brooklyn, N. Y.; I. Thatcher, East Orange, N. J.

Charlotte, N. C.—Southern Automobile Co., The, under North Carolina laws, with $25,000 capital; to manufacture and deal in automobiles and bicycles. Corporators—J. W. Zimmerman, J. H. Ross, E. B. Littlefield, P. P. Zimmerman and J. H. Harn.

Pence to Enter the Jobbing Trade.

In connection with the expansion plans of the Pence Automobile Co., of Minneapolis, Minn., it is announced that the concern will go into the jobbing of supplies and accessories on a large scale, with a view to covering the Northwestern States. The company has just purchased a $60,000 piece of land on which is to be erected a $75,000 concrete, six-story building which will serve to accommodate the sales rooms, garage, manufacturing department, repair department, stock room and warehouse which will be needed in connection with the plans for the future. From 100 to 150 men will be employed, together with a number of travelers, and the concern will distribute the Buick car in Minnesota, North and South Dakota, Montana and Western Wisconsin. H. E. Pence, of the company will shortly make a round of the Eastern factories with a view to selecting his jobbing lines.

Bartholomew After Additional Plant.

Overflowing its present factory on Fredonia avenue, the Bartholomew Co., of Peoria, Ill., is negotiating for the plant on Peoria Heights formerly occupied by the Sieberling company and later by the St. Louis Motor Car Co. When the latter concern went into bankruptcy all of the machinery was sold and taken out of the buildings, but the latter remain ready for easy rehabilitation into an automobile factory.

Columbus Firm in Receiver's Hands. ..

H. C. Moore has been appointed receiver for the R. O. Williams Automobile Co., of Columbus, O. The application for the receivership was made by E. L. Pease and Edward Cargill, who as receivers for the Broad-Oak Rink and Automobile Co., claim that the Williams company is not paying its rent for the use of the garage building which it occupies.

In the Retail World.

O. E. Steinbaugh has obtained the Rambler agency for Dallas, S. D. He will conduct a small garage business as well.

The Overland Motor Car Co., of New Jersey, with headquarters at East Orange, has been given the entire State of New Jersey on the Overland line.

The Marinette Auto Co., of Marinette, Wis., has moved into larger quarters in the Cook building. The new garage has been fitted with very complete equipment for handling cars of all types.

The Wilmington Automobile Co., the Franklin agents in the Delaware city of that name, are erecting a large garage and salesroom at Delaware avenue and Tatnall street. It is of two stories, 83 by 114 feet.

T. F. Newman's garage at 1857 East Eighty-second stret, Cleveland, O., was destroyed by fire last week as the result of a gasolene explosion. Testing batteries too near a pail of fuel was assigned as the cause.

The Algonquin Garage has leased for a long term the building to be erected in the north side of Sixty-sixth street, west of West End avenue, New York City. Arthur Coombs and Ernest Gogin are the proprietors.

Harry S. Leyman, formerly assistant general manager of the Pope Motor Car Co., and later with the Buick company, has taken the Buick agency in Cincinnati. He will establish a salesroom and conduct the business in his own name.

The Twin City Automobile Exchange, a new concern, has leased the brick building at 10½ Sixth street, S., Minneapolis, Minn., as a salesroom, garage and repair shop. W. H. Raisbeck and F. W. Starr, from Dubuque, Iowa, organized the company.

R. S. Crawford, who formerly built the Crawford car in Hagerstown, Md., has abandoned manufacturing for retailing. He has removed to Boston, Mass., and joined with George H. Lowe, the old and well known Boston dealer, in the formation of the Crawford & Lowe Co., which will handle the Gyroscope car in New England.

The Coit Automobile Co., is a new entrant in the agency field in Omaha, Neb. It has taken the Rambler and Mitchell lines. J. C. Coit is vice-president and general manager; Dick Stewart, president; and Miss Ella J. Brown, secretary and treasurer. Temporary quarters have been engaged at 2025 Farnam street, pending the completion of a new garage.

In addition to handling the E-M-F car in New York City, it transpires that the H. J. Koehler Co. have secured a large slice of territory on that line, viz.: New Jersey, Eastern Pennsylvania, southeastern Connecticut and fourteen counties in New York, including Long Island. The Koehler order is said to call for 1,000 of the E-M-F cars.

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NEW DODGE IN PRICE CUTTING

Reputable Chicago Firm Organizes a "Club" for Customers—Reducing Maintenance Expense the Excuse.

In an effort to meet cut price competition without descending to open cut price methods, the Joseph F. Gunther Co., of Chicago. Ill., which handles a well known and high grade car and otherwise ranks with the most respectable of the Windy City automobile concerns, has devised an ingenious technical dodge for placating customers who are restive under full list prices for supplies and accessories and who insist on taking advantage of some of the cutting that is being done here and there. The scheme takes the form of a "club" to be known as the "Owners' Supply Department," to which customers are eligible to "membership" by the payment of a $10 initiation fee. The value of "membership" lies in the fact that the "members" are granted substantial discounts from the regular prices on motor goods.

The reasons given for the establishment of the "Owners' Supply Department" are not that it provides an apparently graceful way of cutting prices without opening up as a cut price house, but that the plan provides "a feasible method of demonstrating the decreased expense of maintenance and repair," it being offered in extenuation that "one of the most serious obstacles with which the automobile dealer has to contend is the widespread opinion that the first cost of the motor car is nothing compared with the subsequent expense," and that because of the poor success heretofore in disabusing prospective customers of this idea and because of the number of sales thus lost, some method of showing that the cost of running a car could be brought down to very favorable figures was necessary.

To be a "Great White Show."

Whatever may be the attractions of the "Great White Way," which is credited with constituting no small part of the lure of Manhattan, its splendor is to be rivaled for a week by the "Great White Show," with 10,000 electric lights, fabric firmament of Italian sky blue, paintings, mirrors, statuary, gilt, stained glass, silkiline draperies, ornamental pillars, and a garden of natural plants and flowers. For be it known, the American Motor Car Manufacturers Association's show in New York, which will open New Year's night, is to be so adorned as to merit the "Great White Way" designation.

Taking a leaf from the book of successful showmen, not all of the exhibition will be concealed back of the ticket gate, the public being given a free outside "teaser" which is calculated to draw the crowds and make the affair known to anybody who comes within several blocks of the big Lexington avenue building. The port cochere and entrance are to be treated with handsome cast figures, balustrades, brilliant electric signs and a large painting, the whole to be played upon by the beams of searchlights.

As will appear from the accompanying illustration, the decorative scheme at the entrance partakes of the nature of an arch, and should prove an atractive invitation to go in and view the wonders inside the building. The prevailing key of the interior decorations is of the early English period,



PORTICO TO THE PALACE SHOW

having pillars and balconies, of stucco and beam work. The main galleries will be white with sap green, relieved by gilt signs. A series of paintings entirely around the balconies will depict scenes from recent automobile contests. Ornamental standards will support the glass signs with pennants which are to be provided for all exhibitors and which are to be illuminated with concealed incandescents. Ten heroic statues, eight feet in height, are to be disposed about the exhibition, and satin banners and elaborate draperies will set off the accessories exhibits.

Melon Cut for Reo Employes.

In addition to substantial dividends to its stockholders, the Reo Motor Car Co., of Lansing, Mich., has beclared a dividend for all employes who have been with the company for a year or more, in accordance with the co-operative plan which last year resulted in a similar distribution. The dividend is 5 per cent. of the salary earned during the past year, amounting to about two and a half weeks' extra pay. and applies to over 700 men.

Mooers Joins the Aerocar Staff.

L. P. Mooers, the well known engineer, has joined the staff of the Aerocar Motor Co., Detroit. He will, of course, fill the posts of engineer and designer.

SEES FAULTS IN FOREIGN CARS

Jeffery Gives His Observations on European Practice—Why He did not Ride to a Tin Mine.

Although Thomas B. Jeffery, of T. B. Jeffery & Co., who recently returned from a three months' tour through Scotland, England and Germany, traveled primarily for recreation he also spent some time investigating the methods of foreign manufacturers of automobiles. The opportunities embraced by Mr. Jeffery of riding in cars of foreign make incidentally brought to light a number of interesting and instructive points.

"Some good cars are built abroad," said Mr. Jeffery in discussing his observations, "but they do not build them as well as we do to sell for a price within reach of the average man. All foreign cars are very high priced. They are very heavy, little effort being made to reduce the weight and prices are high, partly for the reason that the production is small and components of many foreign cars are made by a number of different manufacturers and merely assembled by the one who sells them. This is costly and the foreign maker will not cheapen his product as some American makers do by buying cheap parts just to allow for selling at a low price."

The Rambler builder tells of an interesting incident which occurred in England. Mr. Jeffery hired cars of various makes when he wished to make local trips on several occasions. While in England one day he was riding in a car of very high price, and in passing along the road noticed a tin mine a short distance from the main highway; a rather rough road ran to this mine. When he asked to be taken up the slight grade to a point where he could view the operations, the chauffeur told him that the car could not negotiate the climb, because the rocks in the road would tear the lower portion of the car to pieces. Upon investigation he found that the clearance was so small that this danger was really imminent. American cars, built with as liberal clearance as the Rambler, will safely pass over obstacles ten inches in height.

Miller Resigns and Burwell Succeeds.

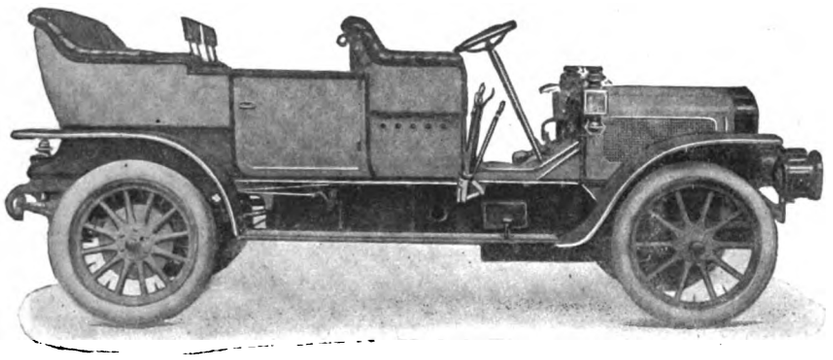
William J. Miller has resigned as vice-president and superintendent of the Oscar Lear Automobile Co., of Springfield, O. In the capacity of superintendent he has been succeeded by George Burwell, who gained his experience at the Olds Motor Works in Lansing, Mich.

Buick May Launch High Wheel Buggy.

According to apparently well founded reports, the Buick Motor Co. is preparing to launch a high wheel motor buggy. It will be of 12 horsepower and list at $450.

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THE 1909 WHITE STEAM CARS



During the coming season, the White Steam Cars will be built in two distinct models which, while differing widely in size, in power and in price, will follow the same general lines of construction. The horse-power ratings of these cars are based on the actual power delivered at the rear wheels, not merely on formulas or on the power delivered at the engine.

The larger of the new cars (shown in the above illustration) is known as the Model "M." It is rated at 40 steam horse-power and sells for $4,000, f. o. b. Cleveland, equipped with acetylene headlights and tank, oil lamps, horn and tool kit. The wheel base is 122 inches; the front tires 36 x 4 inches and the rear tires 36 x 5 inches. The car is regularly equipped with a straight-line seven-passenger body.

The smaller of the cars will be known as the Model "O." It is rated at 20 steam horse-power and sells for $2,000, f. o. b. Cleveland, equipped with oil lamps, horn and tool kit. The wheel-base is 104 inches and the tires, both front and rear, are 32 x 3½ inches. The car is regularly equipped with a straight-line five-passenger body.

The power plants of the two models are identical in design, the only difference between them being in the dimensions of the various parts. The principal mechanical change in the new cars, as compared with previous White models, is in the engine. The new engine is fitted with the Joy valve mechanism, instead of the Stephenson valve mechanism. The valves are driven from the connecting rods, as are the pumps. The eccentrics are done away with and the cylinders are brought close together, permitting the use of a short one-piece crank-shaft, with but two main bearings. The number of parts in the engine is reduced by one half and the entire construction greatly simplified.

As in previous models, the generator — the simplest steam-making device ever designed — consists simply of a series of coils of steel tubing joined together. The regulating system, whereby the temperature and pressure of the steam remain constant without in any way engaging or requiring the attention of the operator, is similar to that in the 1908 cars.

A circular containing full details of the new models will be sent on request.

THE WHITE COMPANY

CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St.
BOSTON, 320 Newbury St.
PHILADELPHIA, 629-33 N. Broad St.
PITTSBURG, 138-48 Beatty St.
CLEVELAND, 407 Rockwell Ave.
CHICAGO, 240 Michigan Ave.
SAN FRANCISCO, 1460 Market St.
ATLANTA, 120-122 Marietta St.

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THE MOTOR WORLD

Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer.
F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . $2.00
Single Copies (Postage Paid) . . . . . 10 Cents
Foreign Subscription $4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

☞Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, SEPTEMBER 24, 1908.

The Sale of a Birthright.

Although the American Automobile Association has sold its birthright for very much less than a mess of pottage, it is not possible to believe that the terms of its settlement of its alleged controversy with the misnamed Automobile Club of America will settle much if anything for any considerable length of time.

Doubtless it will please and profit the Long Island Motor Parkway corporation, in which men on both sides of the squabble are deeply interested financially, as greatly and as deservedly as it will displease the A. C. A.'s acrobatic "man Friday," the Savannah Automobile Club; but it is unthinkable that such truly American clubs as those which exist in Boston, Buffalo, Newark, Philadelphia, Chicago, Kansas City, and elsewhere, and which approximately are as large and important as the local garage-keeping New York organization will tamely submit to its dictates or dominion, even though it may hold credentials as the American agent for all Europe. We do not believe such clubs will accept the sop of free sanctions, which the New York club is throwing to them, and to all others, in an effort to enlist support and recognition, and thereby render themselves subservient.

We hope and believe that such clubs will lose no time in repudiating both the disgraceful settlement and the men responsible for it and in placing in power men able to distinguish their duty to the national organization and who do not shy at shadows or haul down the flag at the first sign of trouble.

We believe that the bad faith of the New York club ultimately will be convincingly demonstrated. Its offer of gratuitous sanctions is the first sign of it. It will be further shown by its disregard for foreign limitations and other foreign rules as applied to open races or contests, or even specifically announced international events, which was the ostensible but not real principle for which it contended. It simply cannot and dare not attempt generally to enforce such rules in this country; and when it fails to do so its emptiness and bad faith will be revealed. It if does attempt to enforce them, we do not believe any club in America will give it heed and its impotency will become as apparent.

Ancther Phase of Standardization.

To those makers whose product has been the result of slow and painstaking development rather than elaborate, simultaneous design and whose operations are conducted on a somewhat modest scale, the advantages of absolute interchangeability of parts must be viewed in the light of a somewhat expensive luxury which as a pure investment, may be regarded as of questionable profit. Granted a car which is "making good" on the market, as the phrase goes, and which requires only trifling modifications from year to year, it is evident that to standardize it completely, must involve a complete recasting of the design, and what is practically the construction of an entirely new car along the lines of the old. On this account, the maker whose output is limited and who is not at liberty to sink any considerable amount of capital in the production of an entirely new model, is quite excusable in holding back, despite the fact that standardization as a principle constitutes one of the broadest economies known to industrialism.

As a matter of fact, it may be questioned whether it would pay to rebuild any sort of machine merely for the sake of standardizing its parts unless it were an established and staple design likely to be granted long continuance on the market. Usually the large makers who have adopted the principle to its practical limits have done so chiefly in the production of new types, and as gradually as possible. It is in this way that the maker whose production is confined to only one or two models built in limited numbers also may avail himself of its advantages.

Whenever it becomes necessary for any reason to alter the design of any part of the machine its reconstruction may proceed on the principle that whenever possible parts already in use on the machine may be duplicated. Thus bolts and studs, pins and special screws, even rods and other connecting linkages, may gradually be standardized, it being evident that every time the production of a part is multiplied by two or three, its cost is reduced in some proportionate amount. By this gradual means two or three seasons will suffice to bring a machine to a state of reasonable and sane interchangeability while its salient features may even remain practically unchanged so far as appearances are concerned. The process thus effected has involved no elaborate scheming, no costly modification of drawings and processes in the shop, and no experts' fees are to be deducted from the balance sheet. The change merely is the result of the engineer's or designer's own personal efforts, and is brought about by his having constantly in mind the simple principle that wherever it is possible to duplicate the same part or even to duplicate dimensions, in some instances, a small economy is effected. The summation of these little economies is what furnishes the wherewithal to pay the big salary check of the acknowledged production engineer, as well as the big dividends quoted on so many large undertakings.

The Bluff that was not "Called."

It is to laugh! It is small wonder that all of those who espoused the undeserving cause of the so-called Automobile Club of America in its so-called controversy with the American Automobile Association have had need to stuff handkerchiefs into their mouths and to hold their sides when attempting to discuss the alleged "treaty of peace." They are entitled to their laughs—

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to all the good, long, loud guffaws of which they are capable. It is small wonder that Judge W. H. Hotchkiss, president of the A. A. A., a man with a real backbone, is reported to be so filled with disgust as to be on the point of resigning his office. For of all loose-jointed, slab-sided, weak-kneed, jelly-spined, cross-eyed treaties, alliances, agreements, or whatever else it may be styled, that ever were executed, it is impossible to conceive any that is at once so mirth-provoking and astounding as the document signed by the representatives of the "high contracting parties" in issue, the one a local club, the other a recognized national association.

To call it an agreement or a treaty of peace is sacrilege. It is a joke—a sidesplitting conveyance of most of its power and perogatives by the national organization to the local club. It reads as if the Automobile Club had placed its desires on paper and as if the association's representatives had signed in the dark and without reading it. It was near-cruelty on the part of the club to take advantage of virgin innocence by resorting to flim-flam practices and keeping the shells shifting and the pea rolling so that the A. A. A. conferees could not follow the game.

Far from clearing the atmosphere, the settlement befogs it. Apart from the transferal of both the Vanderbilt cup race and the Grand Prize event to interests represented by the Long Island Motor Parkway, the key to the situation is contained in the definition of an international race. In the terms of settlement, this definition is so loosely drawn that not only is a race of the sort declared to be one announced or advertised as international, but any race open to American and foreign entrants; and as all open or free-for-all events invite entries without discrimination, every open race or any program thereby becomes an "international race" and falls under the dominion of New York's local club, which happens to be the American agent of an European organization. As if this were not bad enough, the definition is made apply not merely to races, but to contests generally. This seems to make clear that any program of any sort which includes both open events and events restricted to domestic cars will require two sanctions, one from the New York club, the other from the national association; and thus is confusion confounded. The solitary peg at which the A. A. A. conferees appear to have grasped seems to have bent under their own weight. It is evident that they sought to maintain that the entry of foreign cars owned and entered by Americans shall not constitute an international event, but by adroit use of the pea and the three shells, the A. C. A. made this provision an optional one; the word "may" appears where "shall" was the term necessary to fit the case, even if it could be forced to fit after the stipulation that any open event is an international event.

The definition does not seem to permit of any other construction. If this interpretation is not correct, the parties to the agreement should lose no time in again getting together and presenting explanatory diagrams to assist general understanding.

The humor of the situation is intensified by the fact that most of those who were even reasonably well informed, excepting only the compromisers and "trimmers" and peace-at-any-price men in the A. A. A., were well aware that the Automobile Club of America was playing a gigantic game of bluff assisted by a show of money and by a lot of noise made by several space-fillers and newspaper clairvoyants, most of whom are foreign importations and some of whom were paid by the club for creating the clatter. Despite the hubbub, the club insiders and their helpers knew their anti-American cause was practically hopeless and that they were licked to a finish if only the A. A. A stood by its guns, "called" the bluff and refused to parley; now that peace has been declared, several of the number hilariously admit it.

It probably is the first time in history that a local club has brought a national organization to its knees and placed America in the position of being dominated by an American agent of European government. The A. C. A. was anxious to becloud the real issue and to save the foreign side of its face by obtaining recognition of the European weight and cylinder limitations in the Vanderbilt cup race, and although it resorted to some contemptible tactics in the effort to gain its end, it is not possible not to admire the astonishing success of its bluff—a success that surely was beyond its wildest dreams, even though it points the way to chaos in automobile sport in America.

It is possible to admire and applaud a good bluff or a man or organization that puts up a good fight and loses. There can be no admiration or applause for the man or organization that pitifully turns tail or lays down before the real fight even has commenced.

COMING EVENTS

October 1, Richmond, Va.—Richmond Automobile Club's race meet, Virginia State Fair.

October 1-2, Indianapolis, Ind.—Indianapolis Automobile Trade Association's sealed bonnet endurance run.

October 2, Poughkeepsie, N. Y.—Race meet in conjunction with Dutchess County Fair.

October 2-3, Brighton Beach, L. I.—Motor Racing Association's outlaw 24 hours race.

October 6-9, Chicago, Ill.—Chicago Motor Club's 1,000 miles reliability run.

October 7, 8, 9, Cleveland-Toledo, Ohio—Cleveland Automobile Club's reliability contest.

October 7, Philadelphia, Pa.—Quaker City Motor Club's 200 miles road race, Fairmount Park.

October 10, Long Island—Motor Parkway sweepstakes for stock cars.

October 10, Providence, R. I.—Rhode Island Automobile Club's race meet, **Narragansett Park.**

October 14-16, Cleveland, O.—Cleveland Automobile Club's reliability run.

October 17, Hartford, Conn.—Automobile Club of Hartford's hill climb, Avon Mountain.

October 17, Kansas City, Mo.—Automobile Club of Kansas City's race meet, Elm Ridge track.

October 24, Long Island.—Vanderbilt cup contest.

November 26, Savannah, Ga.—Automobile Club of America's (New York), 400 miles outlaw race for foreign cars.

Hooray! "Dunc" Curry, Hearst scout, clairvoyant and "auto editor," says that even if the national organizations do not recognize as official the records made in the 24 hours outlaw race at Brighton Beach, he himself will recognize them; and, of course, nothing more is necessary; the matter is settled for all time! Ever since "Dunc" set out to rescue Fair Fame and went into the clairvoyant business he has been "seeing things." Only a few days ago he read the stars again and imagining himself to be the automobile public, he gravely told a waiting world what it, that is, he, demanded; so it is not so strange that he now should fancy that he is all the national associations rolled into one.

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THIRSY ARRIVE AT MONTAUK POINT

Few Failures in Mechanical Efficiency Run on Long Island—Seasickness After a Plunge Through Sand Dunes.

Thirty of the 37 contestants in the two days' mechanical efficiency test held on Long Island, from end to end, or strictly speaking, from Bay Ridge to Montauk Point, finished the run on Tuesday last, 17th inst. Held under the auspices of the New York Automobile Trade Association, the event was a success from a mechanical and reliability standpoint, although financially it is said to have proven otherwise.

Twenty-six of the starters completed the run with perfect scores. Twenty-two of these were in the contesting division and four in the touring class. The former received clean tallies for both mechanical and time schedule, and will be awarded first class certificates and medals to the drivers. The latter division had clean time schedules and will receive medals for their performances.

The scores were as follows:

Perfect Scores—Contesting Division.

E. H. Brandt, Cadillac.
F. O. Hinhauser, Maxwell.
W. W. Burke, Mora.
R. M. Owen, Reo.
Mrs. Joan Newton Cuneo, Rainier.
L. A. Disbrow, Rainier.
C. A. Kirschhof, Mitchell.
Sidney B. Bowman, Apperson.
J. W. Gogarn, Reo.
Charles Lowd, White.
William Knipper, Chalmers-Detroit.
F. G. Falberth, Oldsmobile.
V. P. Pisan, Zust.
J. W. Mears, Acme.
Frank Dunnell, Ford.
Frank Eveland, Stevens-Duryea.
L. Young, Stevens-Duryea.
H. C. Townsend, American Locomotive.
P. J. Johnson, Amer. Locomotive Taxicab.
A. H. Whiting, Stoddard-Dayton.
W. D. Brown, Mitchell.
Paul Cimiotti, Pullman.

Penalizations—Contesting Division.

	Points.
C. D. Kelsey, Maxwell	Disqualified
Carl Reichenbach, Stev-Duryea	105
O. R. De Lamater, Mitchell	125
C. H. Tangeman, Lancia	1,000
W. W. Price, Brush	1.000

Perfect Scores—Touring Division.

W. E. Shuttleworth, Haynes.
W. J. Wyatt, Oldsmobile.
Mrs. J. R. Ramsey, Maxwell.
Harry Fosdick, Lancia.

Penalizations—Touring Division.

	Points.
H. M. Casbary, Lozier	Disqualified
C. M. Louther, Stevens-Duryea	1,000
R. Newton, Stoddard-Dayton	1,000
Frank A. Burrelle, Autocar	1,000
Harry Fosdick, Lancia special	1,000

Of those penalized in the contesting division C. D. Kelsey's Maxwell was disqualified for taking the wrong road from Montauk Point on the return trip (which really added three more miles to its running distance); Carl Reichenbach's Stevens-Duryea lost 105 points for ignition troubles; R. P. De Lamater's Mitchell was penalized 125 points owing to an oil feed pipe which became clogged and caused trouble with the connecting rod bearing. Lozier entry No. 39 in the touring division, was disqualified for leaving the noon control at Blue Point without checking out, and H. M. Casbary, the driver was debarred from competing in future events held under the auspices of the Trade Association. On the entry blank this driver's name was interpreted as H. M. Casbrunt, and it was rumored that the name was manufactured for the occasion—a combination of two drivers' names or something of the sort intended to disguise the man in case he got into trouble, the car having been sent out to scorch ahead and beat all the others to Montauk and ignore controls. C. A. Emise, who entered the car, states that this was all a mistake; the driver's name, he says, is Casbary, and calling him Casbrunt was someone else's blunder. Under either name, he failed to reach the Point first owing to a broken differential, which caused him to block the whole procession, much to the disgust of the real contestants.

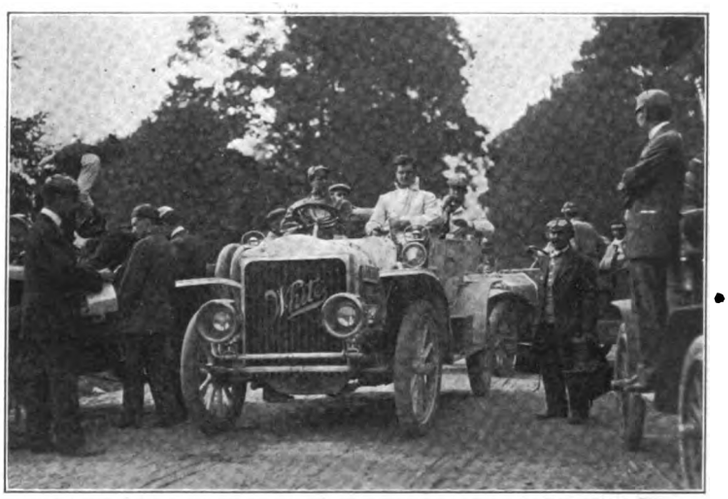
Others who dropped out along the line and did not reach the final checking place until long after the time limit, losing 1,000 points, were: C. H. Tangman's Lancia, W. W. Price's Brush, C. M. Louther's Stevens-Duryea, R. Newton's Stoddard-Dayton, Harry Fosdick's Lancia and Frank Burrelle's Autocar. The last four were in the touring division.

The technical committee required several days to calculate and make public the penalizations which were based on an initial credit of 1,000 points. For every minute late at a control the penalty was one point and for every minute early, two points, no allowance being made for mechanical repair. When a contestant was delayed from tire trouble the time lost in replacing tubes was credited to his running time and he was not penalized, provided his motor had been kept running during the time the repair was being made. For any mechanical adjustment or repair, the penalty was one point per minute spent in repair, per man, i. e., if two passengers worked upon the car in making an adjustment the penalization would be just twice as much as if one person did the work—three men three times as much and so on ad infinitum, provided all were passengers.

The caravan left Columbus Circle, New York, at 7 a. m. Wednesday, and were escorted by the Stevens-Duryea pacemaking car across the bridge to Bay Ridge, L. I., where the cars were officially checked out. This detour of nine miles from Brooklyn, over an extremely dusty section of Long Island, was not appreciated by the contestants to any great extent, when the well-oiled roads of Queens and Nassau counties might have been substituted. But the route had been laid out by the technical committee, composed chiefly of Alex Schwalbach, who had decided that Bay Ridge, where the bay rum comes from, was a few blocks

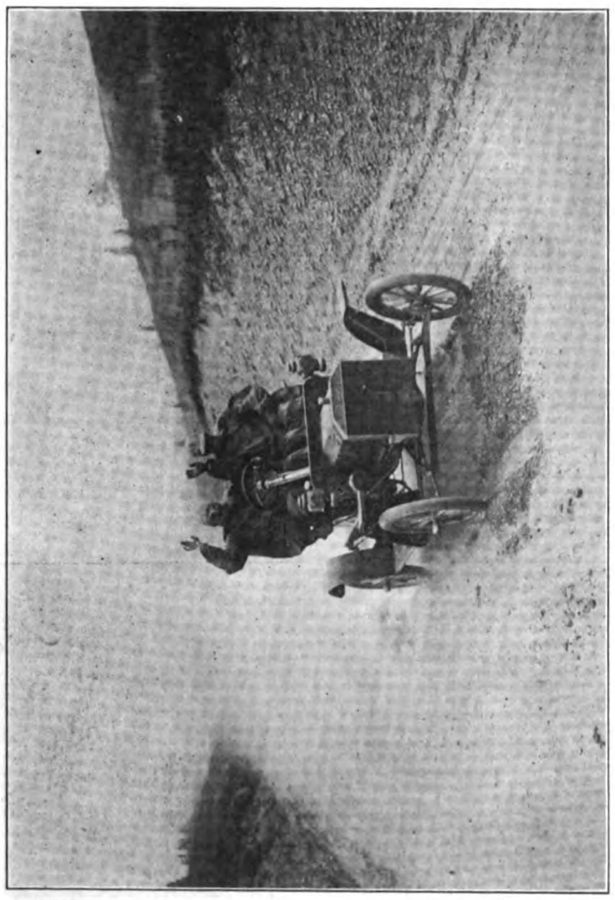


STEVENSON DURYEA, THE PACEMAKER, AT LYNBROOK

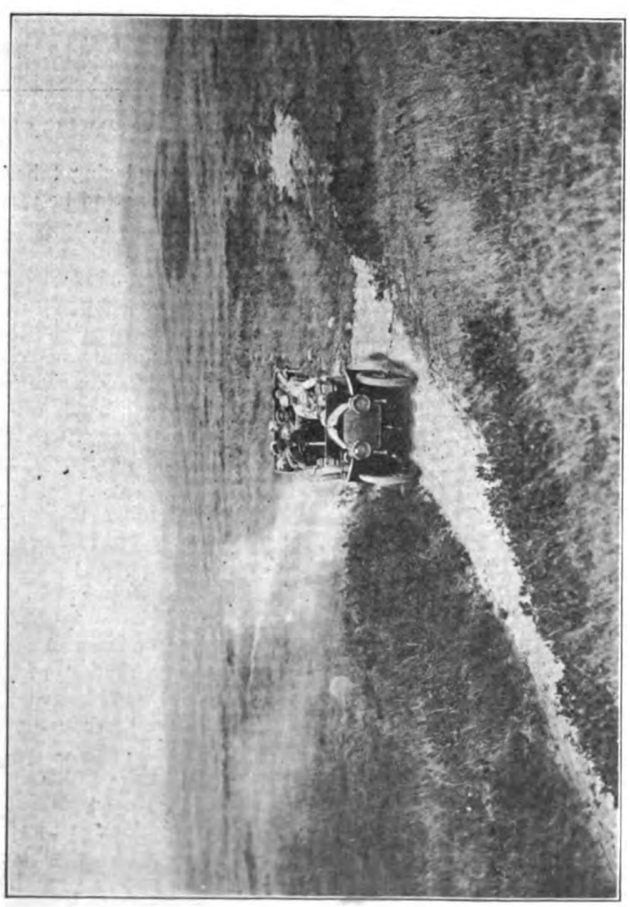


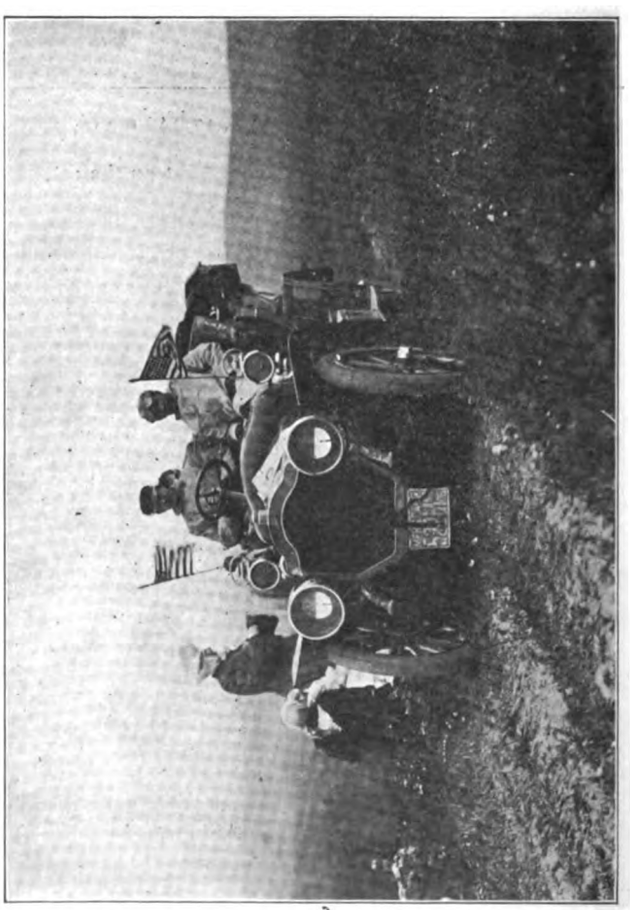
TAKING ON SUPPLIES—CHARLES LOUD, WHITE, IN FOREGROUND

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VIEWS SHOWING THE DIVERSITY OF LONG ISLAND ROADS COVERED IN THE MECHANICAL EFFICIENCY RUN

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west of Brooklyn, according to the colored map, and that dust or no dust, the Ridge was the place for the start.

A few miutes later, with the dust left behind, it seemed like a milk-and-water child's play affair, over the smooth roads through Lynbrook, Merrick, Amityville, Babylon, Patchogue, Good Ground and Southampton, but when Amagansett was reached the drivers changed their minds. Between this place and Montauk Point there was a stretch of thirteen miles of deepest sand that caused all sorts of cussin'. The road diverged in several places that were not marked and as a result the majority of cars took the wrong road and wandered about for some time trying various paths among the sand dunes, getting stuck occasionally and experiencing some tire trouble now and then. Having decided that they were "in wrong" the strayed ones retraced their steps and finally reached the Point anywhere from 20 minutes to an hour late in most cases. Owing to this flaw in the directions, no penalizations were imposed for lateness between Amagansett and the night stop.

Numerous farmers were lined up along this section of the route with teams,looking for easy money pulling stranded contestants out of mud holes and ruts, but the cars managed to take care of themselves and the dealers in crops and summer board did no business.

Montauk Point is a rather isolated spot, jutting out into the Atlantic Pond, and is noted principally for its lighthouse. Few motor cars ever get that far, as the sandy deserts between that extremity of Long Island and Amagansett have quite a villainous reputation. Mudholes with their mud turtles also are frequent in these latitudes. A little more than a year ago, the Long Island Automobile Club held an endurance run to this cape and many of the contestants stuck in the little grains of sand and despaired long before the blue ocean beyond the point could be seen.

One of the first cars to fall in last week's test was a non-contesting Lozier car driven by H. M. Casbary, which cracked a differential. A Stoddard-Dayton, with R. Newton as pilot, plumped into a hole and smashed a wheel and W. W. Price's Brush runabout stripped its gears. The Continental Caoutchouc Co.'s Knox also became stranded and did not report at the Point.

Among the contestants were two women drivers—Mrs. Cuneo, of course, and Mrs. J. E. Ramsey, of Newark, both of whom went through with perfect scores. Mrs. Cuneo would not carry a mere man in her Rainier Glidden tour perfect score veteran, but loaded it with feminimity instead; and they made good time, too.

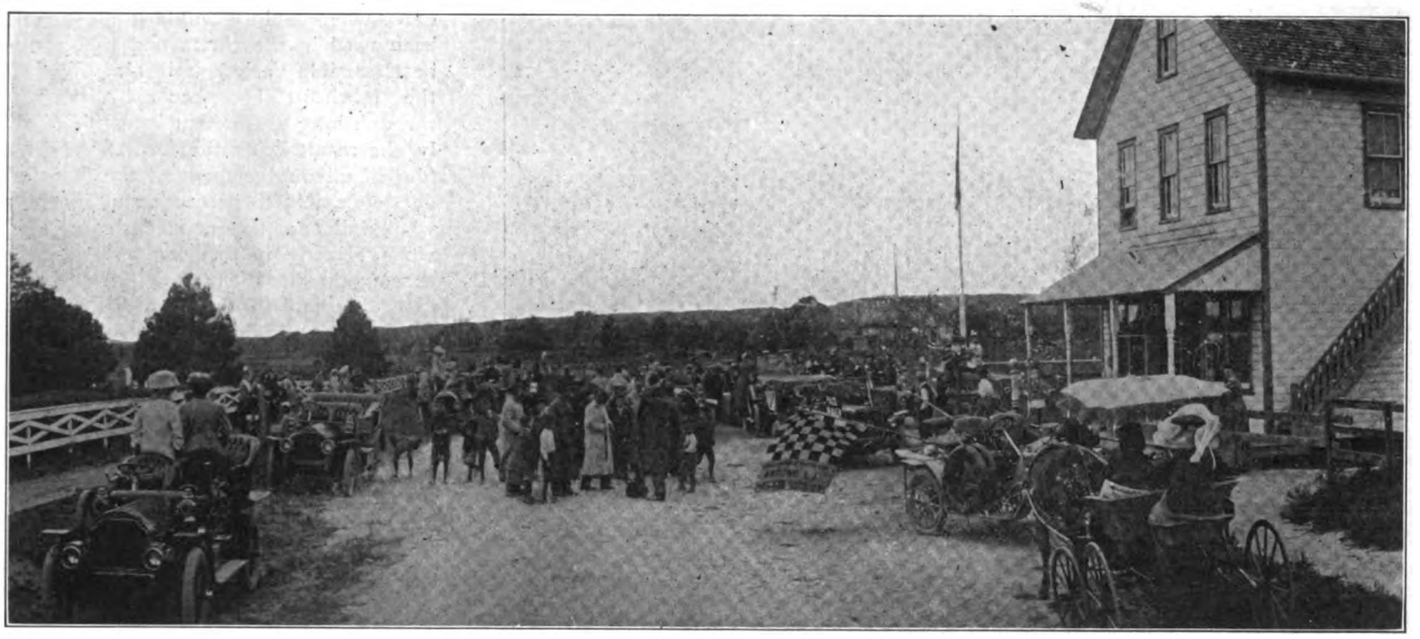
The Long Island R. R. steamer "Shinnecock" was provided to "accommodate" the tourists over night, as Montauk did not possess sufficient shelter for the small army and if the afternoon's run was strenuous, the interval between bed time and dawn was more so. The old boat was made fast to the dock and it proceeded to cut up high jinks in the swelling waves, banging against the wharf every two seconds. Then a very promising nor'wester sprang up and blew across Fort Pond Bay and almost made a low comedy revolving ship of the "Shinnecock," such as has been seen in vaudeville. Nearly everyone was willing to confess they had experienced a sad case of mal de mer before morning, and those who would not admit it were seasick just the same.

When dawn broke, a very crafty scheme was worked by the dear steward. Everyone had to pay one dollar for breakfast in advance before entering the dining room. When they saw the food, in nearly every case something would cause them to decide they were not hungry and—well, when motorists had departed, Mr. Steward had nearly all their breakfasts and their money, too.

The return trip through the sand dunes was not as hard as the outgoing journey. At Good Ground, the cars switched over to the hillier north shore, stopping at Riverhead for luncheon on the fair grounds; the stop was appreciated by those who had not breakfasted, and also by the country folk who obtained a free show without extra charge. On the last leg of the run the hilliest section was encountered, but the going was comparatively easy and troubles were few and far between. Passengers now could get a little sleep.

The last time control of the run was at Flushing, and the cars were permitted to loaf the rest of the way into New York and up to the Automobile Club of America, the official finish. The first two cars to check in at the wind-up were the two Stevens-Duryeas driven by L. Young and Frank Eveland, who reached the club house in West Fifty-fourth street at 6:50 p. m., while the last to arrive was J. W. Mears, in the Acme, who did not get in until 2:07 G. M., in the chill gray dawn of the following morning. Tires had delayed him slightly.

A plucky run was made by Earle L. Ovington, who rode an F. N. motorcycle and got as far as Montauk with a clean score. Two miles from Amagansett, the deep sand forced him to leave the "road" and run the rest of the journey on the L. I. railroad tires. While doing this he slipped down an embankment and got considerbly scratched up, but he reached the Point in

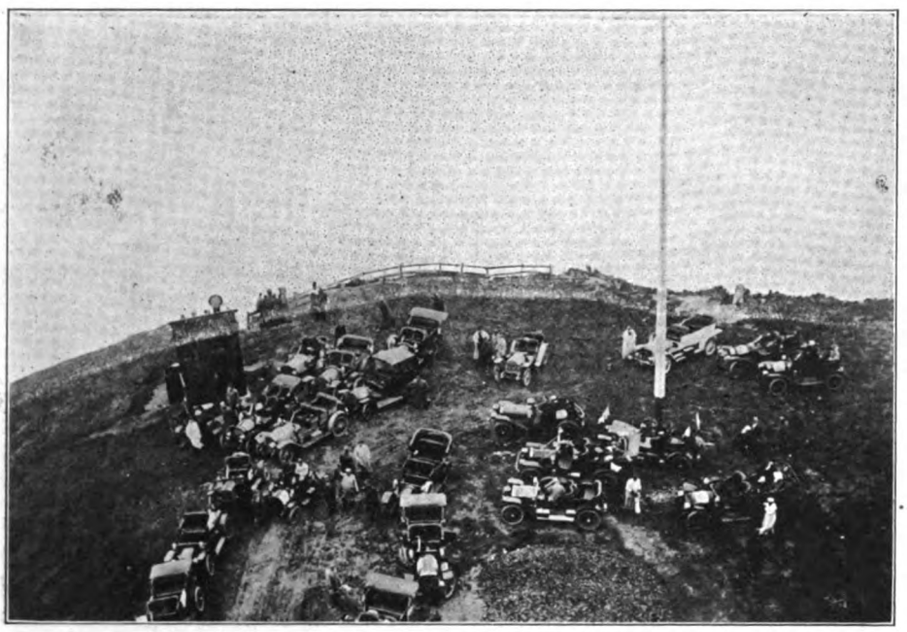


THE AMAGANSETT CONTROL—BEFORE PLUNGING INTO THE SAND DUNES

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good time. The next morning he found that nearly all of his spokes had been broken by the hammering they received on the ties and he decided to ship his machine back to the city.

"Wally" H. Owen did quite a stunt with the official Garford car. On a wager, he drove the entire distance with his broken right arm in a plaster cast. He managed the steering wheel with his left hand and manipulated the brakes and change-speed gear levers at the side with his feet. In view of the deep sand and hills necessitating a great deal of gear shifting, it was a remarkable undertaking. He was not a bit cautious in his driving either, for he went at top speed wherever possible.



AT THE TIP END OF LONG ISLAND—VIEW FROM LIGHTHOUSE

Lowell Wants Annual Road Races.

Lowell, Mass., "has it bad," to use the classic phrase. The recent road race there has wrought up the Lowell club and public to such an extent that they are quite crazy over motor racing and want to hold no less than three big speed contests a year on the Merrimac Valley course. Memorial Day, Fourth of July and Labor Day are the three holidays proposed. J. H. Tyson has offered to put up a $5,000 cup for the next Labor Day race, and while this contest probably will be an annual feature in the future, the Lowell folks "want more."

Virginia Farmers to See Races.

In connection with the State fair in Richmond, Va., a race meet, under the auspices of the Richmond Automobile Club, will be held on October 10. Two ten miles events for stock runabouts, a 50 miles race, two 10 miles events for stock touring cars, and a motorcycle race will comprise the card. Entries close on October 5 with Dr. H. W. Bassett, Richmond, Va.

BITTEN, BUT NOT BY SNAKES

Man Who Advertises Marvelous Bargain Gets the Worst of It—Supposed Customers Prove to be Sleuths.

Edward F. Moore was afraid of snake bites, feared journeying home in the dead of night, had an automobile for sale, and things. Now he is in trouble. A few days ago he inserted an advertisement in a New York daily paper which has a circulation of about 1,000,000,000, that he had a car valued at $4,250 for sale at the great sacrifice of $1,200. He sat calmly in his room in West Ninety-eighth street, awaiting replies and got loads of them. But what he wanted was to see the prospective purchasers call at the address with the $1,200.

At length, two gentlemen with large feet, detectives by profession, visited Moore, as they were motor enthusiasts—both of them. They began to discuss the automobile which was neither in the flat nor out on the curb. The machine was described in glowing terms and the prospective buyers were intensely interested. It had planetary sliding gears, a six-cylinder two-cycle motor and the cylinders revolved on their axes perfectly; was equipped with a steam heated radiator and soot-proof plugs that never let the water leak out; best single-tube tires, a float feed carburetter on the floating rear axle, et cetera.

"Have a drink, Old Scouts," said Moore, but the sleuths were members of the W. C. T. U. and did not indulge. Instead, they arrested the Moore chap. In addition to the whiskey—vile stuff—in his clothes, he possessed a couple of gray wigs, several tubes of chloral, morphine and a few other narcotics, together with a hypodermic syringe. These were not used for any sort of experimental work on the car, as might be supposed. Instead, according to Moore they were for snake bites when he went hunting out in Central Park and elsewhere. He feared reptiles.

In his pockets were found numerous communications from out of town "clients." Whether any of these had tasted his booze or bought the "car," was not known. This is another variation of the "bring your cash when you call' game, which we have always had with us. Some day flying machines will likely be "sold" in this same way.

Cause and Cure of Clutch-Slip.

Clutch-slip in the case of the multiple disc type of connection is almost invariably traceable to lubrication difficulties. In cases where only a single grade of oil has been used in the clutch and that is of the best possible variety it is quite likely that the lubricant has become "worn out" through long use or that it has dried slightly, the result being the formation of a thin film of oil on the faces of the discs which does not yield to pressure and squeeze out when full engagement is desired. The obvious remedy is to open the casing and thoroughly flush out the parts, in some cases a complete dismantling and cleaning of the parts individually being desirable. The more obvious methods of increasing the tension on the spring, or of replacing it by a stronger one is seldom of avail. Only where the cleaning method has been found inadequate is the use of increased tension or a stronger spring found to be advisable.

Big Increase in French Registration.

Returns from the total registration of motor cars in France show that 37,586 cars are in use in the country at the present time. The corresponding figure for last year was 31,286. One-fourth of the cars at present registered are in the Department of the Seine, the total for which has been increased by no less than 1,300 cars since the last returns were compiled. Figures regarding the powers of the cars are of interest, as they are averaged from year to year. Thus, in 1902, the mean horsepower was 5; in 1903, 6; and in 1904, 7. From 1905 to 1907, inclusive, it was 9, 10 and 11, while this year it has risen to 12. In the Department of the Seine alone, however, it is higher, reaching the maximum of 17 horsepower.

About Thinning Oil for Lubrication.

"Don't try to make a light oil by mixing a heavy oil with kerosene," is the advice that comes from G. A. Haws, the manufacturer of Panhard oil. "Now that cold weather is about to set in, if the oil you are using does not flow freely, use a lighter grade of oil. Heavy oil thinned with kerosene is a common cause of cylinders carbonizing."

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TERMS OF A. A. A.-A. C. A. TREATY

Astounding Power Conveyed to New York's Local Club—"International" Definition Proves of Kindergarten Variety.

After more or less holding of its breath for a week, the world now knows what is an international automobile race. Thanks to the large heads that sit upon the shoulders of the conference committees of the American Automobile Association and the Automobile Club of America that settled the so-called controversy between those organizations and the equally large heads that ratified the terms of settlement, the definition is so clear that every child in a kindergarten can comprehend it. Contrary to general supposition, an international race or contest is not an event in which the entries come from abroad, but is any open or free-for-all contest, or one which any bunco man seeking the shekels of the public cares to advertise as "international." Over all such contests run in this country the local New York club, which is the American agent for England, France, Italy, Germany and Africa, henceforth will have jurisdiction. Any club programming an open race must therefore apply to the New York organization for sanction. These sanctions will be as cheap as waste paper. The A. C. A. will give them away without charge. They can be had for the asking, a fact which will prove of keen financial interest to bunco race promoters in the back woods and elsewhere.

The amazing definition is contained in the articles of agreement between the A. A. A. and the A. C. A., which were withheld when the announcement of peace was made last week, and which were made public early this week through the press agents employed by the Automobile Club; the press agents submitted them without comment; it scarcely was necessary.

The conditions indicate that the A. C. A. representatives are marvelous hypnotists or unusually skilful confidence men, who took mean advantage of the A. A. A. conferees and ratifiers when they were in a trance, or that the latter first lost their backbones and then were afflicted with mental paralysis. The A. A. A. men gave away all save a tattered remnant of their organization's power although their faculties apparently did not become benumbed until the Long Island Motor Parkway had been taken care of. After this year the Parkway people will control both the Vanderbilt cup race and the Grand Prize race.

The full text of what surely is the most astounding agreement ever entered into between a national association and a local club, is as follows:

This agreement, made this 11th day of September, 1908, by and between the Automobile Club of America, a membership corporation, created under the laws of New York, and the American Automobile Association, a corporation created under the laws of New Jersey. Witnesseth:

I. That the American Automobile Association recognizes and acknowledges the Automobile Club of America to be the sole American representative and member of the Recognized Automobile Clubs and that as such it is and shall be acknowledged and recognized as the sole and unqualified authority for all International automobile affairs, including races and contests, in the United States of America.

An international race or contest is one which is announced or advertised as "International," or one which is open to entrants of America and foreign countries. Cars of foreign manufacture may be entered in a race or contest without making the same an "International" race or contest, provided, however, that such cars be owned and entered by American citizens, firms or corporations.

II. The Automobile Club of America agrees that after it has conducted the Grand Prize race at Savannah, in November, 1908, it will retire from the promotion of races, so long as international racing shall be conducted in the United States of America, under the sanction of said club and in accordance with the rules of the International Association of Recognized Automobile Clubs, in as far as such rules shall apply to the race in question.

III. The American Automobile Association agrees to have changed the conditions of the Vanderbilt cup race, proposed to be held on Long Island, in the Fall of 1908, so that the same shall be a purely national race and not international in character, and in that event the Automobile Club of America agrees to remove all embargoes and disqualifications on such Vanderbilt cup race, and the same shall be raced under the rules and conditions as now announced, except such conditions as would make it an international race, and the Automobile Club of America agrees to do everything in its power under these conditions to make such race a success.

IV. The American Automobile Association agrees that it will do everything in its power to make the Grand Prize race at Savannah, proposed to be held in November, 1908, a success and to remove all embargoes and disqualifications against said race and to use its influence in having as many American cars as possible to enter this international race.

V. That after the year 1908 the Automobile Club of America agrees to transfer, under a proper deed of gift, its gold grand prize cup to a corporation controlled by the Long Island Motor Parkway, Inc., upon the condition that the said donee each year promote and conduct an international race for the same, under the sanction of the Automobile Club of America and under the rules then existing of the International Association of Recognized Automobile Clubs.

VI. The American Automobile Association agrees that after the year 1908 it will have transferred to a corporation controlled by the Long Island Motor Parkway, Inc., the Vanderbilt cup, upon the condition that the said donee will promote each year a national race for the said cup, under the sanction and rules of the American Automobile Association for national races.

VII. The Automobile Club of America agrees to make no attempts to encourage other clubs to withdraw from the American Automobile Association.

VIII. It is hereby mutually agreed that the Automobile Club of America shall be the sole representative for the American Automobile Association for all foreign countries.

IX. This agreement shall be binding on both parties hereto until terminated, as hereinafter provided. It may be terminated upon the first day of January in any year after January 1st, 1910, upon twelve months' previous notice in writing.

In witness whereof, the high contracting parties have caused these presents to be signed by their duly authorized officers, the date first above written.

The men who signed this remarkable document are Henry Sanderson, first vice-president, and S. M. Butler, secretary of the A. C. A., and R. P. Hooper, chairman good roads committee and F. H. Elliott secretary of the A. A. A. It is stated that President Hotchkiss, of the A. A. A., refused to countenance the jug-handled settlement and is so filled with disgust that he may resign his office.

Needless to say, the A. C. A. supporters and newspaper shouters, paid and unpaid, are semi-delirious with delight. Most of them knew so well that the Club was beaten to a pulp, and that its Grand Prize venture at Savannah was foredoomed for failure, if the Association but remained firm, that it has been a struggle for them to whistle loud enough to keep up courage and earn their pay. Not one of them even dreamed that the Association's spinal column would slip into its shoes.

The A. C. A. lost no time in making known that it would issue "international" sanctions for the asking. Secretary Butler readily verified the report, but he was not so sure that any effort would be made to enforce Europe's limitations and other rules, nor did he know what would be done for its useful tool, the Savannah Automobile Club, which so despicably played both ends against each other, and then against the middle. Mr. Butler, however, is not authority for the statement that the European organization and manufacturers are preparing engrossed resolutions attesting their appreciation of the splendid manner in which the club as their American agent has defended their interests and hoisted the foreign flags above the stars and stripes.

The outlaw Motor Racing Association, which consists chiefly of four importers and the press agents of the A. C. A., assisted by a couple of New York dealers, made haste to obtain the first of that club's free "international" sanctions. Later, some representatives of the little outlaw corporation had an interview with the A. A. A. racing board, which held a special meeting yesterday. The men who participated in the recent outlaw 24 hours race thereby automatically suspended themselves and the suspension has not been removed despite efforts to have it lifted. So far as can be learned, nothing definite resulted at yesterday's interview.

Ten Events for Kansas City Meet.

Ten events are on the card for the third annual race meet of the Automobile Club of Kansas City which is to be held on Saturday, October 17. Races from five to fifty miles have been arranged for stock cars.

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KANSAS KILLS PERFECT SCORES

Penalties Galore in First Three Days of Endurance Run to Oklahoma—Exciting Incidents En Route.

If any one of the 31 cup chasing endurancers that left Kansas City, Mo., Saturday, 19th inst., in the Kansas City Automobile Club's six days' contest to Oklahoma City and return, neglected breakfast before the start the hunger didn't last long after they left the asphalt. There was enough to eat and to spare when the first macadam road began to grind itself into little pieces beneath the 124 wheels of one-quarter that many cars. Dust, dust, dust! In front, behind, above, beneath, north, east, south west and all other points of the compass. It turned the black-haired young men who left Kansas City in the bloom of youth into gray-haired old men of ashy pallor.

But Kansas sunshine apparently affects Kansas dust just as it affects Kansas wheat, Kansas corn and Kansas girls. Ask any Kansan what is the best thing in the world and he will chirp right up without consulting William Allen White's treatise on "Kansas is as Elsewhere Isn't," that anything raised under the warming influence of God's and Kansas's sunshine beats anything else in the world by forty ways. So it is with Kansas dust, and although the cup chasers ate it in chunks and washed it down with larger gobs of the same stuff they professed to like it and several of the party who had toured abroad swore by all that is dustly that the France, Italy and Switzerland material tastes flat in comparison.

Regardless of the merits of Kansas dust the first day's run to Emporia was a success. It is true that six of the 31 starters lost points from the original perfect score of 1,000 they had started with, but that was just the purpose of the run. Frank E. Lott, Premier, was the worst sufferer. He was on time at Ottawa, but after leaving there the puncture fiend got in his work and Lott began to compare his with Job's. After using all his spare innertubes and borrowing several Lott was compelled to shuffle into Emporia late enough to result in a debit of 149 points which, with an additional loss of 225 points on the observer's card, brought his score down to 626. C. F. Ettwein's K. C. Wonder lost 280 points, and H. C. Worth's Buick lost 19 points for being that many minutes late because of a puncture received near the city limits of Emporia. T. C. Brown, Peerless, lost 9 points at Emporia on account of a clogged gasolene pipe. E. P. Moriarity, Packard, lost 10 points in a discouraging manner. He had been on schedule time all day and was waiting a few minutes before checking in at the final stop. Just as he was receiving the congratulations of the Emporia waiters the engine coughed and then stopped dead. A hasty examination showed that some of the tasty Kansas dust had given the carburetter indigestion and before it could be relieved the judges counted off 10 points. The only other car to lose points was A. C. Wurmser's National, which suffered a loss of 80.

Thirty-one cars started as follows: Premier official car; E. P. Moriarity, Packard; J. F. Moriarity, Stevens-Duryea; Dr. B. A. Beedle, Peerless; W. L. Walls, Studebaker; Mrs. H. G. Kirkland, Overland; Carl Muelbach, Pope-Hartford; A. C. Wormser, National; H. E. Rookledge, White; Hal K. Sheridan, White; E. H. Jones, Maxwell; Fletcher Cowherd, Corbin; W. S. Hathaway, Maxwell; Carl J. Simons, Maxwell; J. A. Holzman, Maxwell; H. E. Rookledge, Premier; R. C. Greenlease, Cadillac; C. B. Merrill, Moon; Joseph Moriarity, Chalmers-Detroit; James B. Porter, Chalmers-Detroit; D. B. Huss, Brush; F. Woodward, Knox; T. C. Brown, Peerless; J. E. Anderson, Rambler; L. A. Robertson, Franklin; Charles M. Morris, Ford; H. R. Worth, Buick; C. A. Boyd, Ford; Frank E. Lott, Premier; C. F. Ettwein, K. C. Wonder.

Two of the original number of starters were eliminated when the sheets were tallied up on Sunday night at Wellington, Kan., the finish of the second day's run, and 22 of the 29 finishers had not a blemish on their score sheets. The elimination of one of the most promising candidates for the cup was a great surprise, but it occurred not in the run, but on Saturday night after the cars were checked in at Emporia.

Hal K. Sheridan and Walter Reineck had charge of one of H. F. Rooklidge's White cars and they went out for a short drive after checking in at Emporia. As they did not intend to leave the town, they failed to light the gas lamps before starting. Reineck, who was driving at the time got beyond the last electric light just as a farmer's wagon loomed up in the darkness. To avoid hitting the wagon Reineck turned the wheel hard and the car careened and upset in the ditch, turning completely over. Sheridan's left ankle and left wrist were sprained and both men were somewhat bruised. The other withdrawal was Frank Lott. He had lost so many points on account of tire trouble on the first day's run that he considered a continuance of the run fruitless.

The 143 miles run to Wallington was parlor car riding in the morning, but on account of the sand and mud holes that had to be pulled through in the afternoon the committee was afraid that the smaller runabouts would be unable to maintain the 17 miles an hour schedule. Their fears were groundless, however, for all the cars came in on time, the penalizations being for mechanical troubles.

A. C. Wurmser, whose National lost 80 points on the first day, was determined that his car should be on time at Wellington, and so well did he maintain the schedule that he was inside the limits until he got within four miles of the night's control. Then two tires gave way, one within a few seconds of the other. Wurmser and his helper shed their coats and got right down to business with such good effect that it lacked just 15 minutes of the time for checking in when the job was finished. Wurmser opened the throttle wide and the big National hit only the high places in the four miles' run to Wellington. The car got there with just a few seconds to spare.

T. C. Brown had a further run of hard luck. The circulation of his car was bad from the start at Emporia, and it grew worse as he progressed, finally resulting in overheating the engine. A stop was imperative and Brown suffered a loss of 71 points additional to the 109 he lost on Saturday.

Mrs. H. G. Kirkland, Overland, the only woman driver in the run, who came through the first day with a perfect score, lost 25 points on Sunday because of a sprung axle and an accidental stoppage of the motor for the fraction of a second, while H. E. Rookledge's Reo got its first black mark for stopping the engine twice to make adjustments. It cost the driver just 25 points. The Kansas City Wonder car picked up 105 points additional penalization on Sunday on account of engine stops; with its 208 points lost the first day the score of the Kansas City product was 687 at the finish of the day's run. These were the only penalizations of the day.

One big mud hole without any bottom in many places is the best description of the route which the cars followed in the third day's run to Enid. Twenty-eight of the 29 cars that left Wellington finished, but only 10 got through with perfect scores.

The committee spent the evening hearing complaints—and there were many. H. E. Rookledge, who had three cars in the run—a White, Reo and Premier, finally withdrew because he believed the committee had imposed penalties that were unjust, and T. C. Brown, Peerless, was counted out with a broken axle.

It was all because the pilot car took the wrong road and led the trophy trailers through lakes, bogs, marshes, quicksand and mud. The Packard car was the first to get into trouble. Its driver did not see the road skirting a quicksand and water hole and the car plunged in. It stuck there until G. S. Holzhauer came along and loaned a helping rope. Then the Pope-Hartford got stuck in another hole and one of the Whites was imbedded in the mire for nearly an hour.

And then to top it all come the "water jump." The road from fence to fence was not a road at all, but a lake. The pilot car dove and swam through all right, and those behind tried to follow. Some were successful, but a mapority suffered so that the committee, when it reached the night stop, decided that those cars which were late or had suffered damage at the "water jump" would not be penalized. Notwithstanding perfect scores were reduced to 10. The run continues five days longer.

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OLDFIELD AND CHRISTIE EVEN-UP

Barney Wins Match Race—His Rival Best in Time Trials—Big Crowd at Indianapolis Meet.

Barney Oldfield and Walter Christie, with their joint racing partner, Charles Soules, played to crowded "houses" in Indianapolis last week, when they met at the fair grounds track in a three-cornered match for what was announced as a "purse of $2,000." The match was spread over two days, September 18th and 19th, and as it was strengthened by match and open events, with local cars as the headliners. The meet drew paying crowds on both days.

Although it was not to Oldfield's liking, Walter Christie drew most of the attention and applause on Friday, the 18th, when he made the fastest time of the afternoon, by sending his front drive car around the mile oval in 53⅗ seconds. Although it was not a world's record, it was the fastest time ever made on an Indiana track and therefore the crowd may be pardoned for getting joyful. Oldfield had previously tried for a record, but the best he could do was 55⅗ seconds, and Soules's trial was timed in 59 seconds.

The preliminary heats of the three cornered match for "a purse of $2,000" also were disposed of on Friday. Christie and Soules came together in the first and they put up a good race, Soules winning out on the tape by about a foot. Oldfield took Soules's measure in the second heat. What was styled the first final heat was also run on Friday with Oldfield and Christie up. There was considerable surprise when Christie led Oldfield across the tape by a few feet. Oldfield turned the tables on the following day, however, for he won the match. On Saturday Christie also reduced his State record for the mile, made on Friday, by one second, covering the distance in 52⅕ seconds.

There were enough other events on both days to fill up the card. In a special race for Buick cars on Friday Peterson defeated Madden and just afterward Merz won from Reid in the special for Stoddard-Daytons. Peterson was particularly fortunate, winning both the other open events—one a two miles open for cars under $3,000, and the other a free-for-all handicap.

An American Roadster carried off the honors in the free-for-all event on Saturday with a Stearns second and a National third The latter actually finished second, but was set back for cutting in on the pole ahead of the driver of the Stearns. Carl Fisher's Stoddard-Dayton made the biggest score on Saturday. It defeated Paul Smith's Haynes in two five mile heats and in the handicap led the field across the tape. One of the features was a mile race between two National trucks with loads of 6,200 pounds. The time was considered fast, 2:33⅕. The summaries:

First Day—Friday.

Two miles for Buick cars—Won by W. F. Peterson; second, T. Madden. Time, 2:37⅕.

Two miles for Stoddard-Dayton cars—Won by Charles Merz; second, John Reid. Time, 2:.1.

Two miles for fully equipped touring cars under $3,000—Won by W. F. Peterson, Buick; second, Charles Merz, Stoddard-Dayton; third, T. Badden, Buick. Time, 2:33⅘.

Three miles for motorcycles—Won by Walter Berner, R-S; second, Gibney, Indian; third, Oldacre, Indian. Time, 3:47.

One mile time trials—Won by Walter Christie, 0:53⅗; second, Barney Oldfield, 0:55⅗; third, Charles Soules, 0:59.

$2,000 match—First heat (two miles) won by Charles Soules; second, Walter Christie. Time, 2:14⅘. Second heat (three miles) won by Barney Oldfield; second, Soules. Time, 3:01⅕. First final heat won by Walter Christie; second, Oldfield. Time, 2:02⅘.

Three miles for motorcycles—Won by Walter Berner, R-S; second, Gibney, Indian. Time, 3:43.

Three miles free-for-all handicap—Won by W. F. Peterson, Buick; second, Charles Soules (scratch); third, Madden, Buick; fourth, Aikens, National. Time, 3:08⅕.

Second Day—Saturday.

Five miles match—First heat won by Charles Merz, Stoddard-Dayton; second, Paul Smith, Haynes. Time, 5:40⅗. Second heat and match won by Merz; second, Smith. Time, 5:11.

Free-for-all handicap—Won by Merz, Stoddard-Dayton; second, American Roadster; third, Stearns; fourth, National.

Free-for-all—Won by American Roadster car; second, Stearns; third, National.

One mile time trials—Won by Walter Christie, 0:52⅕; second, Barney Oldfield, 0:55; third, Charles Soules, 0:56⅘; fourth, Herbert Lytle, 0:57⅘.

Final heat, $2,000 match—Won by Oldfield. Time, two miles, 2:03.

One mile exhibition between two National trucks carrying loads of 6,200 pounds. Time, 2:33⅕.

Glidden Rules for Indianapolis Run.

When the Indianapolis (Ind.) Automobile Trade Association holds its run to French Lick, Ind., on October 1 and 2, it will endeavor to run it under Glidden tour rules, i. e. the association will make an effort to apply those wonderful rules to a sealed bonnet contest. The run will be 122 miles going and a shorter distance for the return.

Providence Cards Race Meet for Oct. 10.

On Saturday, October 10, a date that will see numerous big motoring events, Providence, R. I., is to have a sanctioned race meet on the Narragansett Park track. The affair will be held under the auspices of the Rhode Island Automobile Club. Eight or more races will constitute the program.

SPECTATORS SETTLE THE QUESTION

Their Clamor Caused o "Compromise" of the Stock Car Problem at Harrisburg —How the Races Resulted.

That good old question, "What is a stock car?" again bobbed up at Harrisburg, Pa., on Saturday, September 17, on the occasion being a race meet at the Middletown fair grounds, and unusual to relate the spectators suplied, if not the answer, at least an answer. J. A. Kline had entered a Pullman car in five of the events on the program, and a number of the other contestants claimed that this car did not meet with the requirements of the A. A. A.'s definition of stock chassis, and refused to compete with it. After a long discussion, the judges decided against Kline, and he withdrew the car. Later the spectators made such a clamor for the officials to allow the car to go out on the track to liven up the tame meet, that the officers let themselves down easily by permitting the machine in question to be re-entered in two events, with Roy Stains at the wheel, "by special request."

He succeeded in lowering the record o 1:26 for the mile track, when he made a circuit in 1:20, and also won the 25 miles free-for-all which was topped at the 10 miles mark when his only other competitor broke down.

B. F. Zimmerman won the first 5 miles event with a Buick, and Charles Smith, in a Jackson, captured the second race at this distance. Then Smith won the third 5 miles brush in the $1,00 to $2,000 class, for runabouts, beating out Zimmerman at the finish.

The 10 miles handicap went to J. W. Richley (Buick), with 80 seconds handicap, in 15:18, running away from the others. Zimmerman starting even with the winner, was second and Paul Messner third.

A gymkhana race proved interesting, when drivers in fantastic costume had to eat doughnuts dangling from a string, whether they liked the greasy cakes or not. Paul Messner got away with this affair, with Zimmerman second.

The summaries:

Five miles, stock runabouts—Won by B. F. Zimmerman (Buick); second, Paul Messner (Jackson). Time, 8:16.

Five miles, stock touring cars, $1,200 to $2,000—Won by Charles Smith (Jackson); second, John Heffelman (Buick). Time, 12:5 .

Five miles, stock runabouts, $1,000 to $2,000—Won by Charles Smith; second, B. F. Zimmerman. Time, 8:09.

Ten miles handicap, free-for-all—Won by J. W. Richley (Buick), 30 seconds handicap; second, B. F. Zimmerman (Buick) 80 seconds; third, Paul Messner (Jackson) Time, 15:18.

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TIRE SALESMEN AT THE FACTORY

Hartford Rubber Works' Conference—Shore Dinner and a Motor Trip—"Snapped" in a Group.

Benefits following the "keeping in touch" of the factory and its representatives having been early recognized by the Hartford Rubber Works Co., of Hartford, Conn., the annual conference of branch managers and salesmen is regarded as one of the important events of the year, and in addition to the heavy matters of prices and policy that constitute the chief meat of the affair, sufficient social sauce and garnishment are added to whet the appetite of men in the selling organization.

To stimulate the enthusiasm and prepare for the "team work" of the 1909 season, the annual conference called at Hartford on Saturday, 19th inst., was enlivened the first day by an automobile trip to New Haven, where Justus D. Anderson, the president of the company, was the host at a Connecticut shore dinner at the Colonnade cafe. On Monday the business meetings commenced, ending on Thursday, when the men returned to their own territories. The conferences informed the representatives fully as to the company's policy for the coming season and during their stay they were given ample opportunity to go through the factory and acquaint themselves with the methods of tire manufacture.

During the course of the proceedings those who attended the conference were duly "snapped" by the enterprising group photographer, the result of whose effort is shown in the accompanying picture. From left to right in the photograph, commencing with the top row, the representatives are as follows: D. W. Shattuck, Chicago; G. D. Niles, Boston; G. R. Noble, Chicago; F. J. Kerner, Chicago; H. E. Field, vice-president; C. H. Kenyon, Buffalo; A. D. Cruden, New York City; J. J. Tompkins, Detroit; C. Clark, automobile department; E. W. Pinney, office; E. H. Fahy, New York City; F. B. MacClunie, office. Second row: C. Langmaid, Boston; George M. Orr; W. T. Powell, Chicago; W. H. Reed, solid department; W. R. Barnes, Philadelphia; H. C. Severance, Detroit; H. F. Snyder, New York City; E. S. Roe, New York City. Third row: H. H. Barth, Boston; F. W. Culver, Philadelphia; E. E. Johanson, Philadelphia; J. P. Krogh, credit department; A. L. Lowe, Buffalo; W. H. Bell, Chicago; P. H. Goodall, Cleveland. Fourth row: H. B. McIntosh, Cleveland; W. Brown, New York City; M. C. Stokes, bicycle department; H. E. Smith, Chicago; R. Gillies, Chicago; Justus D. Anderson, president; H. Plow, treasurer; F. Kesser, Philadelphia; A. W. Kirk, Atlanta, Ga.



PARTICIPANTS IN THE HARTFORD RUBBER WORKS CONFERENCE

B. & S. Improve the "S" Pipe Wrench.

The Billings & Spencer Co. have further improved their adjustable "S" pipe wrench by the employment of a serrated jaw for use on pipe. Every part is a drop forging from steel, and the jaws are hardened. The sliding jaw is fitted in a double groove, which greatly adds to the strength of the tool. The patent thumb screw on the adjusting nurl securely locks the jaw at any desired opening. The wrench is made in three sizes, 6-inch, 8-inch and 10-inch. It is of careful workmanship throughout and its design is such as to make it very useful in confined places where an ordinary wrench would be inconvenient.

Proper Care for Grease Cups.

Unless grease cups are turned down frequently there is a tendency for the lubricant to dry in the ducts to which they are connected, which is increased if they are of any considerable length. On this account a car which is to be left standing for any length of time should be gone over occasionally and the various cups screwed down, or else both cups and piping should be cleaned out thoroughly and left empty.

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THE FIRST MUNICIPAL GARAGE

Engineer Martin of the Bridge Department Tells Its History—How It is Conducted and What It Accomplishes.

New York City owns 102 automobiles. Obviously the cost of maintaining and operating this immense number of motor cars calls for an expenditure of a large sum, and to keep the expense of repairs and renewals within a reasonable amount has been a problem which from the first engaged the serious attention of the heads of the various departments to whose service the cars were assigned.

While New York was not the first city to employ automobiles in the transaction of municipal business, it is not surprising that when the utility of the self propelled vehicle had been satisfactorily demonstrated, the requirements of the largest city of American, called for the adoption of any kind of transportation which would expedite the handling of the interests of its millions of inhabitants; and so soon as the city fathers recognized that automobiles furnished the means of increasing the efficiency of the various departments, the expected occurred, and motor cars were supplied to municipal officials wherever the need for them was shown—and indeed in several instances when the need was but vaguely defined.

In the development of the city's automobile service it was natural that many different types of cars should have been bought. While undoubtedly it is true that if some one make of car had been standardized, and all city departments been supplied with the same chassis, the cost of repairs and replacements would have been greatly diminished, yet the undividual preference of one type of car and in the early days of municipal ownership it was impossible to agree on the type that was best adapted for the widely different service which cars of different departments would be called upon to supply. For instance, in the fire and police departments the need was for a car capable of a high rate of speed, able to withstand the abnormal strain of sudden stops or still more sudden turns. The street cleaning, bridge and other departments of similar nature did not require cars of the speed and strength which were necessary for the fire service, hence the preference of the executives of each department was responsible for the varied assortment of cars which the city owns.

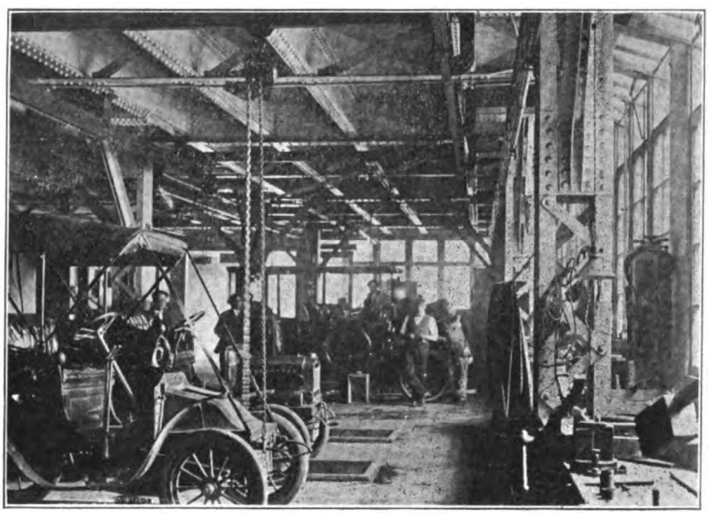
But having secured the cars, the next step was to maintain them at the least possible expense to the taxpayers. The scoffer will say that city officials care little for the interests of taxpayers. Without discussing that question at all, the fact remains that the departments must conduct their business at a cost not to exceed a certain specified sum which is appropriated for the entire year at the beginning of the fiscal year; it therefore is necessary to save money in every possible way and the operation of automobiles could be conducted in a most expensive manner, without reference or thought of cost per mile, or if system and supervision were employed the expense of maintenance could be reduced to a minimum.

The department of street cleaning was the first of the city departments to try the experiment of conducting its own repair shop. Having an extensive machine and blacksmith shop as a necessary part of the equipment for the care of its carts and other horsedrawn vehicles, there remained only the need of acquiring certain machinery to properly do the work of repairing its motor cars. The machinery was obtained, and the results of the experiment, as reflected in the decreased cost of maintaining the 11 automobiles which the department operates, justified the original expense and furnished a precedent which demonstrated the value of a city repair shop.

But though the street cleaners had taken the initiative in the matter of a repair shop, there yet had been no department to try the experiment of a complete garage, that is, such a garage as is established by private enterprise for public use. The subject had been agitated by various officials from time to time, and finally the bridge department of the borough of Brooklyn decided to utilize some of the waste space underneath the arches of the old Brooklyn bridge for the purpose of erecting a complete and thoroughly equipped garage for the cars of its own department.

The erection of the building was accomplished with little expense for labor, as the work was done by the department employes on days when their time was not needed for their regular occupations. A brick building, one story high, 50 feet front, by 145 feet deep was built. A cement floor was laid in it; work benches were erected, and about a year ago the doors opened and the first municipal garage in the country was ready for business.





INTERIOR VIEWS OF NEW YORK'S MUNICIPAL GARAGE

The experiment—for such it was, and such it has been until the recent past when it ceased to be an experiment and took its place as a factor in municipal administration—was due in large degree to Kingsley L. Martin, the engineer of the bridge department. The conception was his, the plans of the building his, and his, too, will be the blame for failure, while credit will be divided among the many. A representative of the Motor World sought Mr. Martin the other day intending to learn something of the physical construction of the garage. It was found, however, that the real value and interesting data in connection with the garage lay in the administration policy rather than in details of construction.

"The reason for the garage?" said Mr. Martin, repeating the question, "Primarily, secondly, thirdly, and lastly, economy.

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Not alone economy in the financial sense, but economy with all that the word may be made to imply. Economy of time, economy in red tape, economy in supplies, in repairs, in replacements, and in labor. Until we established our own garage," continued the engineer, "the automobile question constituted a daily annoyance. While most of the chauffeurs are competent and reliable, they are as whimsical as other folks, and once let a chaffeur decide that there is lost motion in the differential, or a knock in the connecting rod and there was no peace for his 'boss' or for any one else until the engine was knocked down, or the car dismantled. Now, however, we have a daily supervision over all the cars in the garage. Every nut, bolt, screw, bearing, and everything else is put in by our employes, with the result that we know all about the cars, all about their condition and quickly can tell what is wanted and where to put it.

"That phase of the subject is but one point," said Mr. Martin, after a moment's pause. "Of course we save money on repairs because we do them in our shop. We have as complete a machine shop as one will find anywhere; our lathes are sufficiently large to do any work in connection with an automobile; then we have shapers, planers, milling machines, drill presses, emery wheels, etc.; also carpenter and paint shops. This equipment was all in use before we thought of having automobiles. It is the plant necessary to the maintenance and upkeep of the bridges.

"When we started the garage the intention was to use it only for the cars of this department, but soon the borough president saw that we were getting better service from our automobiles than was being obtained by other departments; the cars were less frequently 'laid up,' and he learned by inquiry that we were saving money, so he sent us all the cars under his control, about a dozen in all; then the department of finance followed suit, as did the departments of water supply, gas and electricity and the charities, so that now we have 30 odd cars to look after.

"But the plan has not been all clear sailing," said Mr. Martin. "Municipal enterprises encounter obstacles which are foreign to private projects. We have had trouble in financing the scheme. You see there is no appropriation which can be used for the garage, so we have had to make purchases out of the petty cash fund and wait for the finance department to replenish this fund before we could go ahead with our work. Our plan of operation is this: The cars of the different departments are under the control of a chauffeur of that department. This chauffeur is responsible for the cars of his department, and nothing else. If a car is out of order, he determines what repairs are necessary, and if machine work is entailed, the parts are turned over to the foreman of the machine shop, who has the work done by one of our machinists. Strict time accounting is maintained and though we pay our machinists 50 cents an hour, we charge other departments at the rate of 60 cents per hour. We pay 10 cents for gasolene and sell it for 15 cents. One or two other incidentals we supply at a like increase over cost of purchase and the funds collected through these means serve to pay for the cost of bookkeeping, etc., which, obviously, the bridge department should not be expected to supply to other departments.

"To overcome the delay which usually is connected with the purchase of articles by the city, we have adopted a very simple procedure. The head of a department makes known his want, whereupon I issue an order on a dealer for the article. At the beginning of each month a bill is rendered to the department, one bill for each car, the cars being designated by their state license number. Each day we make out a report for every car in the garage. On a large blank we keep a daily record of the amount of gasolene and lubrication used; of lights, that is carbide or gas; ignition, tires, new parts, repairs, cleaning and any other general expense. The expense of this maintenance is really debited against the car. On the credit side is put the mileage; and when we add to these figures the chauffeur's name, the type of the car and the department to which it belongs we have a record for the days which, when compiled for a month is apt to prove either damning or commendable for the maker, for the chauffeur, either or both. One of the interesting observations which we have made from the figures collected on these daily reports is that chauffeurs against whom is charged the greatest consumption of lubricating oil usually have the least cost of repairs and replacements due to causes other than accidents. The data which we have also shows which type and style of cars are the least expensive to operate. For instance, car 41,144 runs 1,800 miles in one month at about the same cost as car 41,571, which latter has gone only 1,100 miles; either the chauffeur or the car is at fault, and quickly we can determine where the fault lies. Obviously, when new cars are to be acquired this information will aid greatly in the proper selection of the car.

"And now," said Mr. Martin, in concluding the interview, "let us sum up what we have and what we have accomplished by the development of the municipal garage. We have a thoroughly equipped garage which, while not yielding a profit, is self supporting and is practically without cost to the city. Though some money is spent on its maintenance it is not the sum which would be spent in storing cars in public garages. We have two washing stands, 3 pits, lots of work benches, all the facilities in the world for machine work, lockers for the men's clothes, a lavatory and offices. We carry gasolene and other things on hand and can procure almost anything in an hour or two. We are able to buy at a discount. We eliminate graft or commissions. Cars are not 'laid up' unless it is necessary, and then they are repaired in a thorough manner and with the least delay as well as at a minimum expense.

"Without guessing we can tell what type of cars give the best service, which are the most expensive and what is the trouble most often encountered. We know what the chauffeurs are, whether they take care of the car when driving, or merely bang it around in any old hap-hazard manner; the monthly expense sheets show all these things and they offer a medium for comparison that has the deadly parallel column beaten by a mile."

"One thing I noticed," remarked the interviewer as he prepared to leave; "while you have established a chauffeurs' room, you have not done much in the matter of fixing it up for the men."

"No," replied the other, and he smiled a pensive smile. "No, we haven't done much to make it homelike because when chauffeurs might be loafing they usually may be found tinkering about their car. No," he again said, as though in response to another question, and after a moment, he continued: "May be I was somewhat influenced in the determination not to fix up the room by an incident in the life of a western friend who built a fine shed for his goats.

"My friend spent brains, time and money in the construction of this shelter for his animals, he had double walls, double floors and double ceilings so that no draft could enter the building. Then he provided an exit and entrance, which gave the animals entire freedom of action, but yet was so devised that the cold winds would not penetrate. When all was finished he waited for the storm, and finally it came, with all its blinding fury, winds, snow and hail, and it was bitterly cold. In the night the builder of the house went out to see how his animals were protected. He entered the building and was surprised to find it vacant. Then he looked about and finally discovered that the goats for whose shelter the place had been built, were lying on the roof of the house enjoying the full benefit of the storm. No," said Mr. Martin, turning to the papers before him, "I decided not to make the chauffeurs' room homelike."

For Temporary Repair of Springs.

Spring troubles, while seldom of a sufficiently serious nature to cause the laying up of the car by the roadside, yet are the source of considerable delay occasionally which would be reduced were the operator always able to effect a quick and reasonably secure temporary repair. In this connection it is well to carry in the tool box a small portable vice or hand clamp such as could be made to span the leaves of a spring from top to bottom, thus holding them securely together. By this means, with the aid of a "splint" made of thin iron or steel, which also may be carried in the kit, a very respectable temporary repair may be effected in a few minutes.

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ENGINEERS' SOCIETY VISITS OHIO

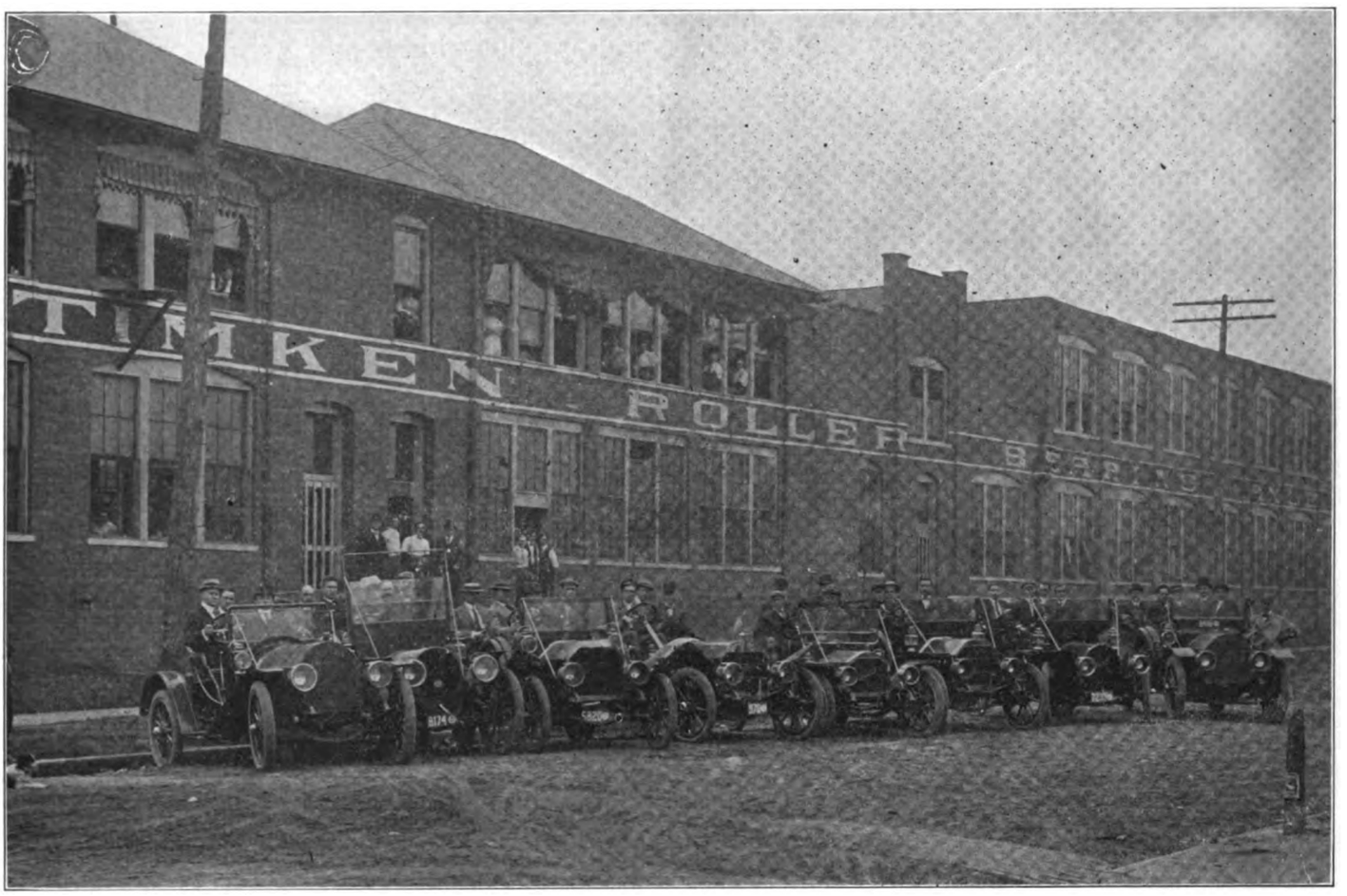
Business Sessions Interlarded with Visits to Plants in Cleveland, Akron and Canton—Technical Papers Read.

That portion of the industry which is located in the immediate vicinity of Cleveland, Ohio, threw open its doors on Friday and Saturday of last week to visiting members of the Society of Automobile Engineers for whom entertainment of the instructive sort as well as the amusing was provided in lavish amounts. In fact so limited was the time set for the meeting and its contingent visits, that the original program had to be curtailed and several of the plants which the engineers had been invited to inspect had to be passed by. Eight different plants in Cleveland and Akron were visited, however, in addition to which the regular sessions of the third quarterly business and technical meetings were held on Friday afternoon.

Friday morning's proceedings included trips to the plants of the Winton, Peerless and Standard Welding companies, and also to the factory of the Hydraulic Pressed Steel Co., where it had been intended to give a special demonstration of several of the processes which have been developed solely in the production of automobile parts, but the other "calls" had consumed so much time that this was found to be impossible as it was the noon hour before the party arrived at the Steel company's shops. The proposed visit to the Stearns factory had to be omitted, and there was but insufficient time to investigate the workings of the new White factory before luncheon.

The technical sessions of the afternoon comprised in addition to the business meeting, the reading of several papers. The first covering "The Limitations of the Universal Joint," being presented by S. Vanderbeek, of the Vanderbeek Tool Works, Hartford, Conn., was illustrated by means of a working model designed by the author. President Thomas J. Fay, of the society, discussed "What Carbon Does to Automobile Steel," while a translation from the French of Louis Lecoin, read by Secretary Charles B. Hayward, presented a critical study of the subject of motor timing induced by the development of the Larrad Timer abroad sometime since, as a result of which the old question as to the advisability of a system of universal timing has been revived.

At the invitation of the Diamond Rubber and Goodrich companies, the party paid a visit to Akron on Saturday, inspecting their plants and being initiated into the mysteries of tire production on the huge scale for which Akron is famous. The limited time prevented the invitation of the Firestone Tire & Rubber Co., from being accepted, but a delegation of members called at the plant long enough to receive the souvenirs which had been prepared for the society and which took the form of stop watches suitably engraved. The afternoon was spent at the plant of the Timken Roller Bearing Axle Co., at Canton, the accompanying illustration showing the members as they were about to leave for a dinner at the Courtland House, tendered by the company, at which "roller bearing cocktails" were served as fitting appetizers for a most enjoyable menu.



SOCIETY OF AUTOMOBILE ENGINEERS AT THE TIMKEN FACTORY, CANTON

Secure Fastenings for Detachable Tonneau.

With the coming into use once more of the detachable type of tonneau the car driver should observe the greatest care in keeping the securing devices perfectly tight at all times. With most tonneaus and otherwise detachable seats there is small chance of accident through the accommodation being thrown overboard. But the risk is sufficiently grave to make the precaution a most imperative one.

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MITCHELL ANNOUNCES NEW MODEL

Attractive Five Passenger Car at Modest Price—Its Liberal Equipment—Broad Option in Body Mounting.

Among the announcements made in connection with the recent Agents' Convention of the Mitchell Motor Car Co.'s forces at Racine, Wis., was that of the new $1,500 model "K," which was heralded as being a particularly attractive offering in its class, presenting a number of features quite in advance of what would naturally be expected at the price. The first details of this car to be given out tend to confirm the impression thus established, in which connection it is by no means insignificant that, in common with the other vehicles of the same line, its parts are all made in the parent factory. The element of assemblage of outside products is wholly eliminated, excepting, of course, the usual details of equipment such as are a highly specialized product in themselves.

One of the most striking points about the new machine is the liberal allotment of accessories included in the regular equipment. In addition to the usual lamp, horn and tool fittings, this also is extended to the ignition system which is of the double type. Splitdorf magneto, commutator, coil and batteries all being included with every stock machine. Another point which makes the offering particularly attractive to the purchaser who seeks "the most for the money," is the fact that the car is of liberal dimensions and by no means looks the modest part which its price would imply.

The seating arrangements provide for five passengers in the touring body, the hood in front is of large size and the 30 horsepower motor of ample size to develop all the driving effort that should be required. As a further inducement, an equal option is given on body mounting between four different styles, that is to say, the regular five-passenger touring body, a surrey body, rumble seat roadster, and a plain runabout with rumble deck. The bodies are wholly of metal, and the tonneau of the touring car is detachable.

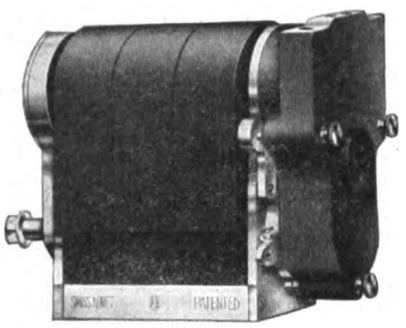
The wheels are 32 inches in diameter, shod with 4-inch tires on detachable rims. The wheel base is 105 inches. The four cylinders of the motor are cast independently and the crank shaft is mounted in five large sized bearings. Five roller bearings are employed as well as a ball thrust to take up end stresses, while the latter type of anti-friction bearing also is found in the steering knuckles. The transmission is of the selective sliding gear type.

Other models for the coming year will include the model "L"—a seven-passenger touring car of 35-40 horsepower and 115-inch wheel base, and the model "J" runabout, which already has made its mark. In fact, as showing the popularity of the latter type, it is stated that it is at present in use by over 1,000 physicians alone.

New Magneto with Special Features.

Continued increase in the use of the high tension magneto system of ignition with its various modifications has brought about an extensive variety of devices which are now on the market and in which is exploited nearly every possible variation of the principles of the generation of electric current in closed circuits. A recent addition to this already extensive array is a foreign importation—the Swiss-Komet, made, as its name implies, in that country equally famous for its mountain scenery and the fine workmanship of its mechanical products. Wende & Co., Chicago, are sole American agents and importers and have just completed arrangements for the introduction of the instrument in this country.

The magneto itself is of the self-contained



type, with both high and low tension windings concentrated on the armature. The condenser is located within the enclosure of the magnets, and the distributing gears are placed at one end of the device, the circuit breaker and distributing arrangements being isolated from them at the other end. An important and distinctive feature of the system is that no independent ground connection is required for the secondary circuit, and that no return wire from the dash is necessary in order to provide for short-circuiting when cutting out the motor. Instead, this is accomplished within the magneto by automatic means whenever the timer is returned to the position of maximum retard. Thus the only outside connections required are the plug wires, and the timer lever connection which is led to the steering column.

Convenient Way to Attach Tool Roll.

A little convenience in connection with the ready accomplishment of roadside repairs is to attach a couple of stiff wire hooks to the tool roll in such a way that it can be hung from the front of the radiator, the hooks reaching over the top. By this means the pockets in the roll are vertical so that the tools will not fall out, while they will be kept clean and accessible at all times. When repairs are being made to some part of the mechanism behind the motor the hooks will be found to take hold of the sides of the body.

CAUSES OF CRACKS IN VARNISH

Hurried Finish Said to be Responsible for Premature Deterioration—How to Distinguish "Force" Cracks.

Does varnish crack upon automobile surfaces more readily and more extensively than upon carriage surfaces? This question is being asked with much sincerity and insistence of late, and while a decisive answer could scarcely be offered, it is nevertheless true that an examination of a large number of automobile surfaces finished within a comparatively recent period has disclosed very many badly finished surfaces.

It has been suggested, says a well known authority, that the excessive vibration and strains to which the automobile surface is exposed is a direct and generous cause of the cracking of varnish, to which, perhaps, we should give ready assent. This form of cracking, however, is easily discerned. The carriage painter calls such fissures "force cracks," which is the proper name for them. They are to be found upon the doors, particularly around the handles and hinges, and upon the large panels where the oscilation is greatest and the vibration and surface strains are most severe. Vibration or force cracks appear upon the surface in long circular sweeps, and are as distinct from the ordinary varnish fissures as day is from night.

Doubtless the hurry up orders which now prevail in nearly all automobile factories are responsible to no small extent for the premature cracking of varnish. Hurrying one coat of paint, or of varnish, over another before the first coat has thoroughly dried, develops a great mass of cracking which, under a more rational system of painting, in which all coats are permitted to dry adequately, would be entirely done away with.

Defects in the drying of the rubbing varnish coats are responsible for the early fissuring of varnish. In the absence of a uniform selection of varnishes, both rubbing and finishing, one may fairly expect to see the final film of varnish disrupt and crack at an early age.

Defective ventilation, and the bad housing facilities generally, of garages, in which extremes of heat and cold predominate, cause varnish cracks. So, too, do sudden changes of the atmosphere produce fissures in varnish. Lack of affinity between the color and the varnish coats produces the fissured varnish structure.

Many other causes crowd fast upon the above-mentioned ones, but suffice it to say, that careful systems of painting, the employment of good materials, and excellent care of varnish during its days of service will tend to reduce the trouble to the minimum.

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PARADOXES IN PNEUMATIC TIRES

What Lifts the Wheel?—Some Curious Factors that Affect the Solution of a Puzzling Problem.

Safe to say, no piece of mechanism is productive of more puzzling mechanical paradoxes and conundrums than the motor car. Probably the pneumatic tire would be regarded simple enough structurally to be free from these. Yet an ingenious foreign correspondent has succeeded in weaving about it a most disconcerting web of confusion by propounding the innocent appearing question, "What lifts a wheel which is mounted on a pneumatic tire?"

That this is not as easy a question to answer as might at first appear, his explanation shows.

"A wheel is given to four men. Two are instructed to push, and if possible roll it in opposite directions," he says. "The other two, placed behind these, are furnished with ropes attached to the rim adjacent to them, and pull in opposite directions. The wheel will not move because all the forces neutralize one another. A child now replaces one of the pulling men; the wheel will then move away from the child, whose force is not equal to that of the man pulling in the opposite direction. The wheel is pushed and pulled, but it is the residual pulling force which moves it.

"A deflated motor tire is pumped up on a wheel. Presently the wheel lifts. What lifts it? The pressure of air in the tire above the metal rim of the wheel pressing the rim down is exactly equal to the pressure of air below the rim pressing it up. All the centripetal forces on the metal rim due to the air pressure are equal and opposite, and neutralize one another.

"The wheel is also subjected to centrifugal forces applied through the tire walls to the rim, for the tire walls are dragging the rim outwards with great force. These likewise neutralize one another except above and below the wheel. The drag upwards on the rim by the tire walls above the wheel is not counterbalanced by an equal drag downwards on the rim by the tire walls below the wheel because of the upthrust from the earth. This upthrust pushes the tire towards the wheel, and takes off some of its down pull. In other words, it supports the pressure which the adjacent portion of tire would have had to support, and which would have necessitated its pulling that much harder in a downward direction on the rim and wheel. The earth, so to speak, reduces the downward pull of the adjacent tire on the wheel from that of a man's to that of a child's.

"A wheel, therefore, in a tire appears to move up and keep up when the latter is inflated, because the upward pull on the rim by the tire walls above the wheel is greater than the downward pull on the rim by the tire walls below the wheel. It is a repetition of the pulling and pushing forces in the illustration with which I commenced.

"I have never seen this subject discussed, and suggest that we ought to regard the wheel as suspended in and by the tire from above rather than as suported from below by the air.

"In a motor wire wheel the hub is hung and supported by the spokes passing upward to the rim above, which, apparently, is itself hung on and supported by the portion of tire above it. In a wooden motor wheel the hub is supported by the upthrust from the spokes below it, and the lower half of the wheel must be hung from the upper half if the latter is suspended at the rim (as appears likely) by the tire walls above it. In that case there is perhaps something to be said theoretically for wire wheels."

The Danger of Oily Rags and Waste.

Absolute surprise always seems to be the chief emotion to struggle with the sorrow of the occasion in the mind of the man whose garage has burned up as a result of the fire from spontaneous combustion. Men who well know theoretically that oily waste and rags, if given a nice comfortable corner to themselves under a shelf or in a wooden box, will ultimately break out into flames, exhibit uncomprehending wonder when such a result follows with rags and oily waste that they themselves have thrown down carelessly. It seems impossible that such good tame rags, which had never before in their whole life exhibited any tendencies to viciousness or wildness, should turn around and do such a thing. And yet the mildest appearing of them are just so tricky as to start the biggest kind of a fire under certain conditions, and that is why they should be thrust into safety galvanized iron waste cans when not in use.

Taking up of Connecting Rod Brasses.

Repeated taking up of connecting rod brasses tends to alter the effective length of the rod, unless especial care is taken to "pack" the under side of the bushing in the stub end sufficiently to compensate for loss of metal at that point as a result of abrasion. In the case of old motors, it thus not infrequently happens that the connecting rod lengths are not a little shortened, the compression being correspondingly decreased and the action of the machine affected accordingly, sometimes unequally in the various cylinders as well. On this account repairmen who have occasion to do much work on engines of a given type, would do well to provide themselves with gauges of the proper length to indicate the required distance between the crank and wrist pins, when the engine is correctly adjusted. This provision would be found to save not a little annoyance in the subsequent tuning up of the engines.

142 MILES ON A SINGLE CHARGE

Extraordinary Performance of a Stock Electric Car—Two Days' Steady Running Fails to Exhaust Batteries.

While those "in the know" are aware that electric mileage and speed "stunts" usually are due to the employment of special batteries, light tires and other than standard equipment, there comes from Indianapolis the story of a most remarkable performance of a Pope-Waverly electric which, according to the Pope Motor Car Co., recently was driven 142 miles on one charge of the batteries and was good for at least 5 miles more. The car, it is stated, was a stock model of the victoria-phaeton type, and the test was a hurriedly conceived undertaking, the stock car being assembled on a rush requisition and the batteries installed. One of the young men from the Pope office was pressed into service, given a definite route, and told to "run her down." He started a 1 p. m. and returned to the factory just before closing time, having covered 63 miles. The car was locked up for the night, making it impossible for anyone to alter the batteries, and the next day was started out again without any recharging in the meantime. Upon his return he had in the two days covered a total of 142 miles, according to the account given the newspapers, and had "juice" to spare. The streets selected for the run were of only average condition, and it is suggested that had the operator been an experienced factory driver, the car could have gone 160 miles without a recharge.

Unequal Temperatures in the Cylinder.

Sometimes unequal temperatures in the various cylinders of a motor may be caused by obstructions in the jackets which, particularly if the circulation is imperfect, may be caused by incrustations due to the use of impure water. While there is no direct and satisfactory method of removing such obstructions, it is possible to accomplish considerable by disconnecting the regular piping and coupling the jackets, one at a time, to a steam pipe, allowing high pressure steam to blow through for some little time. While not removing the main body of scale, this method tends to cut out any obstructing particles and gets rid of any possible silt or core which may have settled at the base of the jacket.

Convenient Way to Carry the Jack.

Undoubtedly the most difficult part of the car's equipment to dispose of satisfactorily is the jack. If carried loosely in the tool box it is liable to damage other articles, while it is apt not to be readily accessible when wanted. It is best carried strapped to the foot or running boards where it can be got at in a hurry.

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NOVEL GOOD ROADS PROPAGANDA

Cleveland Reliability Run to be a Mission Among Farmers—Oratory for Every Town on the Route.

Desiring to do something decisively unique, the Cleveland Automobile Club is going to run a grand instructive tour and educate the comon people up to the proper white heat point as regards the necessity for improved roads. The club's reliability contest, the dates of which have been changed to October 14, 15 and 16, will not go flying through the numerous Ohio towns at exhibition speed, but instead, the contestants will pause at each village. Then having practically the entire local population assembled in the public square, prominent Cleveland orators will "rise up" and harangue the merry villagers and agitate them in the interest of smooth highways.

Controls will be established at each town to hold the cars until the silver-voiced speaker has said all that the natives will stand for and then proceed to the next stand. This, it is expected, will not be difficult to arrange, although the drivers of the cars may not be delighted with the plan, but they will have to submit to the cause of the higher education. The speakers will endeavor to establish more friendly relations and a better feeling between the farmers and the motorist, and by allowing the rural populace to approach and pet the contesting cars with brawny hands and ask questions, principally foolish ones, it is thought that a certain amount of good will will be awakened and that the scheme will also be of benefit to Ohio dealers from a trade standpoint.

Reasons for not Lighting a Newark Park.

As a result of requesting the Essex county park commission for the better lighting of the Elwood avenue entrance to Branch Brook Park, the officials of the New Jersey Automobile and Motor Club have learned that "the public is neither invited nor expected to use it at night.' At the August meeting of the board of trustees of the club Secretary Le Massena was instructed to call the attention of the commission to the dangerous entrance, where, he said, several accidents had narrowly been averted. The secretary also said that the entrance to the park was made all the more dangerous by an S-shaped passage which was lined on both sides by high shrubbery, making it anything but safe for vehicle traffic. The reply of Secretary Alonzo Church, of the park commission, to Secretary Le Massena's communication, besides conveying the intimation that the park is not open for night riding, added the following information:

"The commission has had under consideration the question of roping off the entrance at night, and your letter will be presented to the next meeting with that suggestion."

Motor Cars Aid in Railway Construction.

In the work of constructing the Lackawanna "cut-off" between Lake Hopatcong, N. J., and Portland, Pa., the several contractors are using motor cars to good purpose for the transmission of messages from point to point on the 28 miles route. Some of them have two cars in service and much time is said to be saved. The superintendent on one of the sections uses a four-cylinder car for getting along the line, while two of his engineers each find a buckboard very convenient. The hills through which the railroad is to run offer some very steep grades, but thus far the motor cars have been equal to negotiating them.

Kicks Against Automobile Ambulance.

Rejecting the homeopathic theory of cures being brought about by things that might be causes, Samuel Griner, a New Jersey farmer, after being knocked off a load of hay by an automobile, absolutely refused to allow himself to be conveyed to the hospital in a motor car ambulance. Despite his injuries he insisted that a horse-drawn ambulance be provided, saying that he had had enough experience with automobiles already, and that he preferred to die on the roadside rather than ride in one. His prejudices were respected, and after a long wait a horse pulled vehicle was obtained.

How Automobile Schools Obtain Parts.

When a bad fire occurs at a garage and damages a number of cars, there are generally at least a few people who are pleased. They are not motorphobiacs, either, but the instructors in automobile schools who are thus given the opportunity to get badly damaged cars for almost nothing for their students to fuss over and rebuild. The work interests the students and is of great value to them, while the school is ultimately able to dispose of the rebuilt machines at figures which mean a substantial profit.

Will Give Motorists an Exclusive Road.

As a means of separating the motor cars from other traffic on the much used highway between San Luis Obispo and the beach at Avila, Cal., the local board of supervisors has decided to reconstruct the old stock road between these points and give it over to the exclusive use of automobiles; the regular traffic will continue to the present road, which will be repaired and put in better condition.

Pittsfield Schedules a Climbfest.

Pittsfield, Mass., will have a hill climb on September 26, under the direction of the Berkshire Automobile Association. A stiff course has been chosen, viz: From the foot of Snake Hill to the lookout on the top of the South Mountain road. Eight silver and bronze cups are offered as prizes.

MAKING ROADS WITH MOLASSES

Department of Agriculture Undertakes an Odd Experiment in Massachusetts—Tests Indicate Success.

One of the sweetest bits of road in the country will be found near Newton, Mass., if an experiment in roadmaking which is to be made there should prove successful. It is one of many experiments undertaken by the office of public roads of the United States Department of Apriculture.

Assistant Chemist Prevost Hubbard, of Director Page's scientific corps is leveling a half mile stretch near Newton, and in a few days will be in active supervision of the laying of the first molasses road of history. This molasses is the almost useless by-product of the great cane sugar refineries of the South and the beet sugar refineries of the West and Southwest. It is sickishly sweet, nearly as black and as thick as tar, and almost as powerful as a binder. Having always been a waste product, it can be bought at a lower price than coal tar and in greater quantities.

When the quantity and the sticky consistency of this material were called to the attention of Director Page a number of months ago he conceived the idea that it might aid in solving the always difficult problem of dusty roads. He sent for a supply for laboratory experiments, and detailed Mr. Hubbard to conduct them. The molasses was blended with oils and lime-water, was mixed with rock dust, with earth and with sand and tried out under heat and under water. It behaved so well and held out such promise for ideal roads that the practical test of a real road was planned.

New Jersey Club Plans a Garage.

Plans and specifications for an up-to-date garage are ready for the approval of the board of trustees of the New Jersey Automobile and Motor Club, which will act upon them within a few days. The building will be located on a large vacant lot in the rear of the club house at 4 Park place, Newark, and it is expected that it will be ready for occupancy this fall. It is not probable that the garage will be an extensive one, the club having only a two-years lease on the premises it occupies.

Bay State Holds House Warming.

With an accompaniment of refreshments, music and some informal eloquence, the Bay State Automobile Association opened its new club rooms in the Carlton Hotel, at Boylston and Hemenway streets, Boston, on Tuesday evening, 22d inst. The rooms were about complete several weeks ago, but it was found necessary to make some changes to add to the convenience of the new quarters.

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The Week's Patents.

891,714. Dust Collector for Motor Vehicles. Everard H. Morgan, Didsbury, England. Filed June 14, 1907. Serial No. 379,051.

1. In a vehicle driven by an internal combustion engine, the combination of a dust collector having an inlet situated in rear of the vehicle wheels with an ejector correlated with the said collector and operatively connected with the exhaust pipe of the engine in such manner that the exhaust products induce an inward flow of air into the said dust collector.

891,799. Friction Clutch. Giovanni Enrico, Turin, Italy, assignor, by mesne assignments, to Societa Fabbrica Italiana Automobili Di Torino, Turin, Italy, a Corporation of Italy. Filed Dec. 10, 1906, Serial No. 347,042. Renewed April 15, 1908. Serial No. 427,211.

1. The combination with a fly wheel carrying a casing, of a plurality of discs slidably carried by the interior of said casing and rotating therewith, a driven shaft carrying a drum, a series of discs slidably mounted on the exterior of said drum and alternating with said first series of discs, a sleeve sliding on said driven shaft within, and projecting through said casing, for operating said discs, said sleeve inclosing the end of said drum, a spring on said driven shaft and bearing against a ring carried thereby, said spring through said ring acting on said sleeve to bind said discs together, and means for moving said ring longitudinally of said driven shaft to relieve the pressure of said spring, substantially as described.

891,800. Change Gear Mechanism for Vehicles. Giovanni Enrico, Turin, Italy, assignor, by mesne assignments, to Societa Fabbrica Italiana Automobili Di Torino, Turin, Italy, a Corporation of Italy. Filed Dec. 10, 1906, Serial No. 347,044. Renewed April 15, 1908. Serial No. 427,213.

1. In a variable speed gear, the combination with changeable gears, of operating rods for said gears, a bushing carrying said rods, and resilient means carried by said bushing and holding said rods in position, except when operated by said selective means, substantially as described.

891,803. Base and Crank Case for Hydro-Carbon Engines. Henry B. Joy, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed May 21, 1906. Serial No. 318,055.

1. In an automobile, the combination with two side frame members, of a crank case consisting of three longitudinally separable sections, to wit, a section having laterally extended arms which are secured to said side frame members, a bottom dish-shaped section, and an intermediate section, the first section being formed with the upper half of the crank shaft bearings, and third section with the lower half of said bearings.

891,827. Rotary Explosive Engine. Guy L. Fairbrother, Mystic, Conn. Filed March 20, 1907. Serial No. 363,372.

1. In a rotary explosive engine, a rotor having two sets of tangential pockets in the periphery thereof, each side inclined in opposite directions, a casing surrounding the rotor, means for preventing the escape of gases from the pockets into the space between the rotor and casing, two explosion chambers, the outlets of each oppositely inclined in the direction of the inclination of the pockets in the rotor, means for compressing an explosive charge in one or the other of said chambers, means for igniting the charge in one or the other of said chambers, and an exhaust outlet from said casing.

891,841. Automobile Wheel. Karl Kohlmann and Gustav Andree, Dane, Wis. Filed Jan. 22, 1906. Serial No. 297,366.

1. In a wheel, a rim having a plurality of rectangular transverse recesses formed therein, a tire having a plurality of rectangular transverse lugs formed on its inner periphery, said lugs adapted to fit snugly said recesses, a retaining wire passing through said lugs, and means detachably connecting said wire with said rim.

891,934. Transmission Gear for Motor Vehicles. Russell Huff, Detroit, Mich., assignor to Parkard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Feb. 16, 1907. Serial No. 357,722.

1. In transmission gearing for motor vehicles, the combination with the change speed gearing, the differential gearing and a casing inclosing said gearings, of a drive shaft, and a shaft interposed between the drive shaft and the differential gearing, a clutch gear on one end of said interposed shaft co-operating with the change speed gearing, and a beveled gear upon the opposite end thereof cooperating with the differential gearing, a radial bearing for said interposed shaft adjustably mounted in the casing, and a thrust bearing for said shaft also adjustably mounted in the casing, one of said bearings serving as a lock for the other.

891,936. Carburetter. Antoine Jourdanet, Pierre Billet, and Ferdinand Baron, Lyon, France. Filed June 17, 1907. Serial No. 379,428.

1. In a carburetter the combination with a carburetting chamber and a spirit supply chamber, of pieces of rattan for conducting the spirit from the latter to the former by capillary action and a felt supplier in contact with the rattan in the spirit supply chamber.

891,992. Method of Forming Conically Shaped Ends upon Rollers and Other Objects. Henry Hess, Wawa, Pa. Filed June 27, 1907. Serial No. 381,138.

1. The method of forming conically shaped ends upon rollers, consisting of mounting a plurality of the rollers in circular series and in the desired angular position, rotating the rollers individually, and simultaneously applying the forming tool to all the ends thereof.

891,993. Flexible Piston Connection. Henry Hess, Wawa, Pa. Filed July 27, 1907. Serial No. 385,857.

1. The combination of the piston and the piston rod with a flexible and elastic laterally yielding connecting member.

892,049. Safety Crank for Internal Combustion Engines. Noble W. Hartman, Toledo, Ohio. Filed Sept. 3, 1907. Serial No. 391,001.

1. In a device of the described character, an engine shaft, a hand crank, means for operatively engaging the crank and shaft for forward rotation, and means for the disengagement of the crank and shaft by the reverse rotation of the shaft, said latter means comprising a spirally toothed portion on the hub of the crank, a ring surrounding said

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spirally toothed portion, supports for the ring which permit its lateral movement, internal teeth on the ring adapted for engagement with said spiral teeth, and a spring which holds said internal teeth and said spiral teeth in normal engagement.

892,051. Vehicle. Edward R. Hewitt, New York, N. Y. Filed Oct. 1, 1906. Serial No. 336,855.

In combination with an automobile chassis having rigid side bars, rigid extensions depending therefrom at a pair of transversely opposite points, a rod joining the transversely opposite extensions, levers pivoted thereto and extending rearwardly with respect to the chassis said levers having short arms projecting forwardly and vertically perforated at their extremities, bolts depending rigidly from said chassis through said perforations, springs surrounding said bolts and engaging said arms of the levers on opposite sides, nuts and washers at the lower ends of the bolts serving to hold said springs adjustably in place, and an axle having wheels, at the extremities of the rearwardly extending portions of said levers.

892,075. Tire. Arthur O'Brien, Chicago, Ill., assignor of one-half to Frank P. McGinn, Chicago, Ill. Filed May 23, 1907. Serial No. 375,295.

1. A resilient tire comprising a channeled felly having side flanges, a plain spring band or ring fitting loosely in the channel, a rubber tread fitted in the channel and extending beyond the flanges and resilient means between the tread and spring band.

892,285. Sparking Plug. Emile Moonen and Albert Dumaire, Paris, France. Filed Dec. 7, 1906. Serial No. 346,763.

1. An electric sparking plug for explosion motors, having a body provided with a slotted tubular extension forming one of the poles and a central rod having a head and forming the other pole, the head being provided with a plane surface received by the said tubular extension and rotatable on the central rod for adjusting the distance of the spark producing surfaces.

892,294. Vehicle Wheel. Joseph Nicholson, Boston, Mass. Filed May 24, 1907. Serial No. 375,426.

1. The combination with a wheel, of a pair of shells slidably contacting with the lateral faces of the rim of said wheel, a cushion tire held by said shells, resilient means between said rim and tire, and rolls connected with said shells and adapted by their engagement with the rim and spokes of the wheel to limit the play of said shells.

892,296. Vaporizer for Internal Combustion Motors. Friedrich Oberhansli, Kesswil, Switzerland. Filed Aug. 15, 1907. Serial No. 388,661.

1. In internal combustion engines, the combination of a compression chamber; an air inlet for the same; a vaporizing chamber provided with a fuel inlet; an obturating member separating said chambers and provided with two passages between the same; and means causing said member to slowly close and completely separate the said chambers during the suction period, to open one of said passages near the end of the compression period, and thereby admit a portion of the air compressed into the vaporizing chamber, and to then open the other passage to permit a complete admixture of fuel and compressed air, substantially as described.

892,323. Wheel. Edwin Stancliff, New York, N. Y. Filed April 28, 1906, Serial No. 314,178. Renewed Oct. 14, 1907. Serial No. 397,354.

1. The combination with a track wheel having a centrally disposed opening, of a drive wheel located within said opening, the perimeter of said drive wheel being located in the plane of the inner perimeter of the track wheel, and an elastic tire carried by one wheel for running upon the perimeter of the other, and that other having faces engaging the side faces of the tire when under load.

892,395. Wheel for Motor Vehicles. Harrison H. Boyce, Oyster Bay, N. Y. Filed June 14, 1907. Serial No. 378,923.

1. The combination with a felly having a plurality of separated transversely beveled lugs raised above the surface of the felly, of a channel having a plurality of separated beveled lugs projecting inwardly from its inner surface, and clamping means for engaging said respective lugs.

892,445. Electric Lighting System for Automobiles. Frank L. Parrill, Vincennes, Ind. Filed Oct. 19, 1907. Serial No. 398,260.

1. In an electric lighting system of the class described, the combination with the frame of a motor car, the fly wheel for the motor thereof, and electric lights carried by the frame, of a frame mounted to rock transversely in the frame of the motor car, a dynamo having its shaft journaled in the rocking frame, a friction wheel fixed upon the said shaft, and means whereby the frame may be swung to bring the said friction wheel into contact with the fly wheel.

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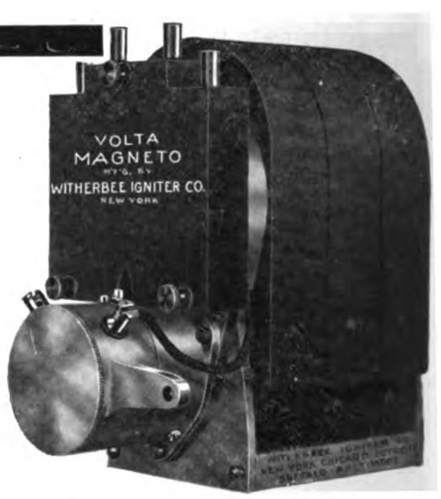
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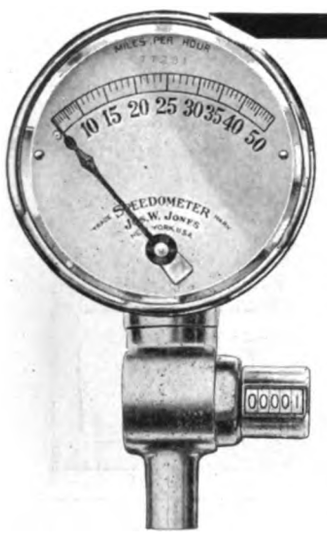
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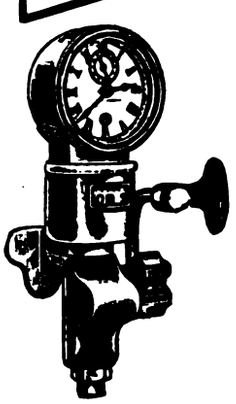
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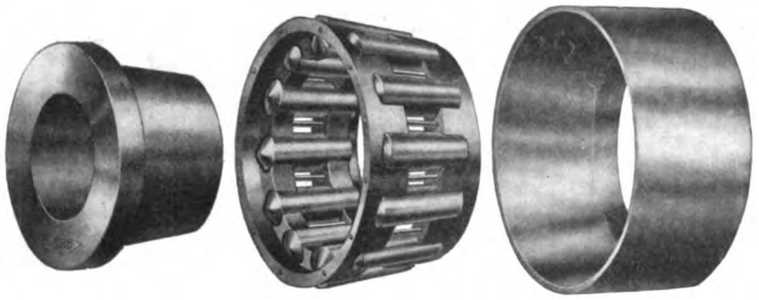
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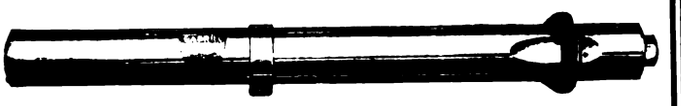
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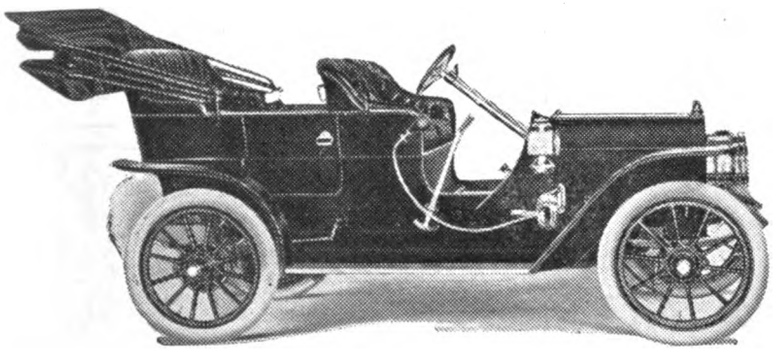
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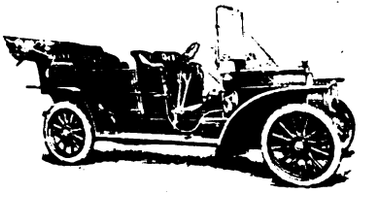
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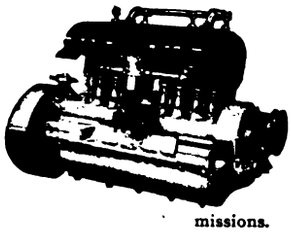
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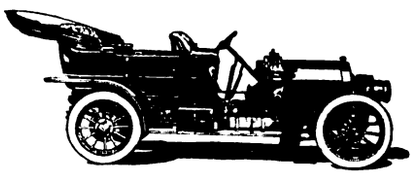
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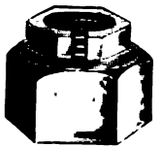
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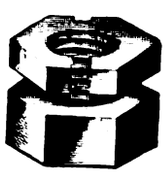
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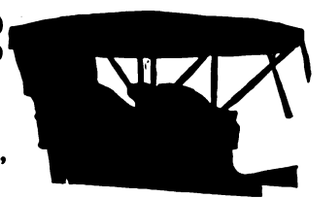
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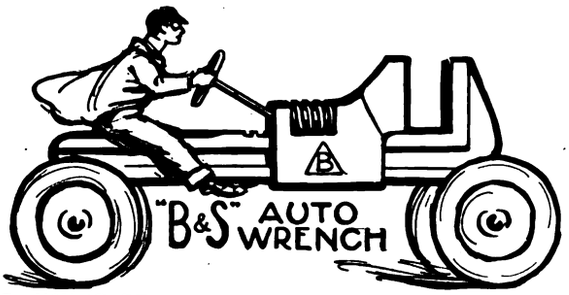
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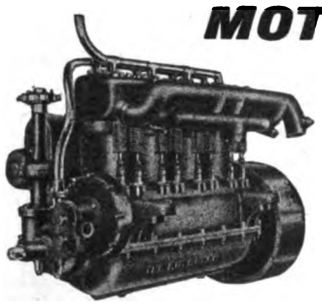
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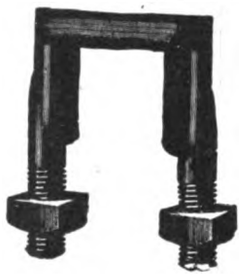
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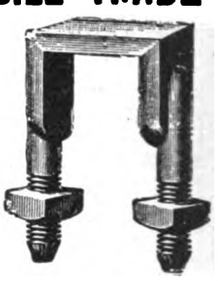
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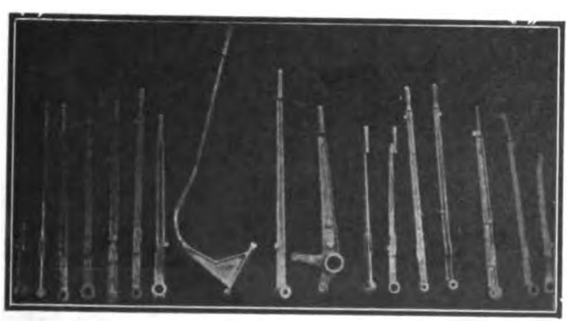
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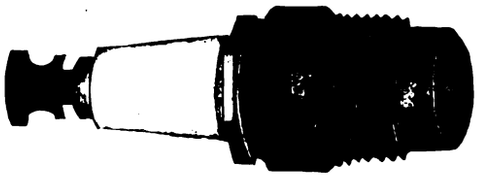
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